CHAPTER 44 STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES

Secs.

4400 GENERAL PROVISIONS

4400.1 This chapter shall establish minimum standards for the management of hazardous waste in the District of Columbia.

4400.2 The standards in this chapter shall apply to owners and operators of all facilities that treat, store, or dispose of hazardous waste, except as specifically provided otherwise in this chapter or Chapter 41.

4400.3 Hazardous waste management by incineration, land treatment, land disposal or surface impoundment, shall be prohibited in the District of Columbia.

4400.4 This chapter shall apply to the treatment or storage of hazardous waste before it is loaded onto an ocean vessel for incineration or disposal at sea.

4400.5 The requirements of this chapter shall apply to a person disposing of hazardous waste by means of ocean disposal subject to a permit issued under the Marine Protection, Research, and Sanctuaries Act only to the extent they are included in a HWMA permit by rule granted to such a person under Chapter 46.

4400.6 The requirements of this chapter shall apply to the owner or operator of a POTW which treats, stores, or disposes of hazardous waste only to the extent they are included in a HWMA permit by rule granted to such a person under Chapter 46.

4400.7 The requirements of this chapter do not apply to the following:

(a) The owner or operator of a facility permitted, licensed, or registered by the District to manage, (e.g., treat, store, or dispose) municipal or industrial solid waste, with respect to the management of wastes excluded from regulation under this section by §§4100.15 and 4100.16;

(b) The owner or operator of a facility managing recyclable materials described in §§4100.30 and 4100.31, except to the extent that requirements of this section are referred to in §4502, 4503, 4505, or 4506;

(c) A generator accumulating waste on-site in compliance with §§4202.6 through 4202.8;

(d) The owner or operator of a totally enclosed treatment facility;

(e) The owner or operator of an elementary neutralization unit or a wastewater treatment unit;

(f) [Reserved];

(g) Except as provided in §4400.7(g)(3), a person engaged in treatment or containment activities during immediate response to any of the following situations:

(1) A discharge of a hazardous waste;

(2) An imminent and substantial threat of a discharge of hazardous waste;

(3) A discharge of a material which, when discharged, becomes a hazardous waste:

(A) An owner or operator of a facility otherwise regulated by this section shall comply with all applicable requirements of §§4402 and 4403; and

(B) Any person who is covered by §4400.7(g) and who continues or initiates hazardous waste treatment or containment activities after the immediate response is over is subject to all applicable requirements of this chapter and Chapters 46 and 47 for those activities;

(h) Except as provided in §4300.6, a transporter storing manifested shipments of hazardous waste in containers meeting the requirements of §4202.1 at a transfer facility for a period of ten (10) days or less; or

(i) The addition of absorbent material to waste in a container or the addition of waste to absorbent material in a container; Provided, that these actions occur at the time waste is first placed in the container and §§4401.31(a) through (e), 4408.3, and 4408.4 are complied with.

4400.8 The requirements of this part shall apply to owners or operators of all facilities which treat, store or dispose of hazardous wastes referred to in §4530.

4400.9 A facility owner or operator who has fully complied with the requirements for interim status, under §4601 shall comply with the regulations specified in this chapter pertaining to his or her facility until final administrative disposition of his or her permit application is made.

4400.10 Notwithstanding any other provisions of this chapter, enforcement actions may be brought in cases of imminent hazard, pursuant to §11 of HWMA (D.C. Code §6-710).

AUTHORITY: Unless otherwise noted, the authority for this chapter is §6 of the District of Columbia Hazardous Waste Management Act of 1977, as amended, D.C. Law 2-64, D.C. Code §6-701 *et seq.* (1995 Repl. Vol.), Mayor's Order 78-185 dated September 19, 1978.

SOURCE: Final Rulemaking published at 43 DCR 1077 (March 1, 1996), incorporating by reference the text of Chapters 40 through 54.

4401 GENERAL FACILITY STANDARDS

4401.1 The regulations in §4401 shall apply to owners and operators of all hazardous waste facilities, except as provided in §§4400.1 through 4400.7 and 4401.2.

4401.2 Section 4401.34 shall apply only to facilities subject to applicable regulations under §§4408 through 4410 and 4420.

4401.3 Every facility owner or operator shall apply to the Department for an EPA identification number in accordance with the Department notification procedures.

4401.4 The owner or operator of a facility that has arranged to receive hazardous waste from a foreign source shall notify the Regional Administrator and the Director in writing at least four (4) weeks in advance of the date the waste is expected to arrive at the facility. Notice of subsequent shipments of the same waste from the same foreign source is not required.

4401.5 The owner or operator of a facility that receives hazardous waste from an off-site source (except where the owner or operator is also the generator) shall inform the generator in writing that he or she has the appropriate permit(s) for and will accept the waste the generator is shipping. The owner or operator shall keep a copy of this written notice as part of the operating record.

4401.6 Before transferring ownership or operation of a facility during its operating life, or of a disposal facility during the post-closure care period, the owner or operator shall notify the new owner or operator in writing of the requirements of this section and Chapter 46.

4401.7 An owner's or operator's failure to notify the new owner or operator of the requirements of this chapter shall not relieve the new owner or operator of his or her obligation to comply with all applicable requirements.

4401.8 Before an owner or operator treats, stores, or disposes of any hazardous waste, he or she shall obtain a detailed chemical and physical analysis of a representative sample of the waste. At a minimum, this analysis shall contain all the information which must be known to treat, store, or dispose of the waste in accordance with the requirements of this chapter or with the conditions of a permit issued under Chapters 46 and 47.

4401.9 The analysis may include data developed under Chapter 41 and existing published or documented data on the hazardous waste or on hazardous waste generated from similar processes.

4401.10 The analysis shall be repeated as necessary to ensure that it is accurate and up-to-date. At a minimum, the analysis shall be repeated:

(a) When the owner or operator is notified, or has reason to believe, that the process or operation generating the hazardous waste has changed; and

(b) For off-site facilities, when the results of the inspection required in §4401.11 indicate that the hazardous waste received at the facility does not match the waste designated on the accompanying manifest or shipping paper.

4401.11 The owner or operator of an off-site facility shall inspect and, if necessary, analyze each hazardous waste movement received at the facility to determine whether it matches the identity of the waste specified on the accompanying manifest or shipping paper.

4401.12 The owner or operator shall develop and follow a written waste analysis plan which describes the procedures which he or she shall carry out to comply with §§4401.8 through 4401.11. He or she shall keep this plan at the facility. At a minimum, the plan shall specify:

(a) The parameters for which each hazardous waste shall be analyzed and the rationale for the selection of these parameters (i.e., how analysis for these parameters shall provide sufficient information on the waste's properties to comply with §§4401.8 through 4401.11);

(b) The test methods which shall be used to test for these parameters;

(c) The sampling method which shall be used to obtain a representative sample of the waste to be analyzed. A representative sample may be obtained using either:

(1) One of the sampling methods described in Appendix I, 40 CFR Part 261; or

(2) An equivalent sampling method;

(d) The frequency with which the initial analysis of the waste shall be reviewed or repeated to ensure that the analysis is accurate and up-to-date;

(e) For off-site facilities, the waste analyses that hazardous waste generators have agreed to supply; and

(f) Where applicable, the methods which shall be used to meet the additional waste analysis requirements for specific waste management methods as specified in §§4401.30 through 4401.32, and 40 CFR §268.7.

4401.13 For off-site facilities, the waste analysis plan specified in §4401.12 shall also specify the procedures which shall be used to inspect and, if necessary, analyze each movement of hazardous waste received at the facility to ensure that it matches the identity of the waste designated on the accompanying manifest or shipping paper. At a minimum, the plan shall describe the following:

(a) The procedures which shall be used to determine the identity of each movement of waste managed at the facility; and

(b) The sampling method which shall be used to obtain a representative sample of the waste to be identified, if the identification method includes sampling.

4401.14 The owner or operator shall prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of his or her facility, unless he or she can demonstrate to the Director that:

(a) Physical contact with the waste, structures, or equipment within the active portion of the facility shall not injure unknowing or unauthorized persons or livestock which may enter the active portion of a facility; and

(b) Disturbance of the waste or equipment, by the unknowing or unauthorized entry of persons or livestock onto the active portion of a facility, shall not cause a violation of the requirements of this chapter.

4401.15 Unless the owner or operator has made a successful demonstration under §§4401.14(a) and (b), a facility shall have the following:

(a) A twenty-four-hour (24-hr.) surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the active portion of the facility; or

(b) An artificial or natural barrier (e.g., a fence in good repair or a fence combined with a cliff), which completely surrounds the active portion of the facility; and a means to control entry, at all times, through the gates or other entrances to the active portion of the facility (e.g., an attendant, television monitors, locked entrance, or controlled roadway access to the facility).

4401.16 Unless the owner or operator has made a successful demonstration under §§4401.14(a) and (b), a sign with the legend, "**Danger-Unauthorized Personnel Keep Out**," shall be posted at each entrance to the active portion of a facility, and at other locations, in sufficient numbers to be seen from any approach to this active portion. The legend shall be written in English and in any other language predominant in the area surrounding the facility, and shall be legible from a distance of at least twenty-five feet (25 ft.). Existing signs with a legend other than "**Danger-Unauthorized Personnel Keep Out**" may be used if the legend on the sign indicates that only authorized personnel are allowed to enter the active portion, and that entry onto the active portion can be dangerous.

4401.17 The owner or operator shall inspect his or her facility for malfunctions and deterioration, operator errors, and discharges which may be causing, or may lead to release of hazardous waste constituents to the environment, or a threat to human health. The owner or operator shall conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.

4401.18 The owner or operator shall develop and follow a written schedule for inspecting monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment (such as dikes and sump pumps) that are important in preventing, detecting, or responding to environmental or human health hazards.

4401.19 The schedule, which must be kept at the facility, shall identify the types of problems (e.g., malfunctions or deterioration) which are to be looked for during the inspection (e.g., inoperative sump pump, leaking fitting, eroding dike, etc.).

4401.20 The frequency of inspection may vary for the items on the schedule. However, it should be based on the rate of possible deterioration of the equipment and the probability of an environmental or human health incident if the deterioration or malfunction of any operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, shall be inspected daily when in use. At a minimum, the inspection schedule shall include the terms and frequencies called for in §§4408.7, 4409.27 through 4409.30, 4410.10 through 4410.12, and 4420.3 where applicable.

4401.21 The owner or operator shall remedy any deterioration or malfunction of equipment or structures which the inspection reveals on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a

hazard is imminent or has already occurred, remedial action shall be taken immediately.

4401.22 The owner or operator shall record inspections in an inspection log or summary. He or she shall keep these records for at least three (3) years from the date of inspection. At a minimum, these records shall include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.

4401.23 Facility personnel shall successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of this chapter. The owner or operator shall ensure that this program includes all the elements described in the document required under §4401.28(c).

4401.24 The training program shall be directed by a person experienced in hazardous waste management procedures, and shall include instruction which teaches facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to the positions in which they are employed.

4401.25 At a minimum, the training program shall be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including, where applicable:

(a) Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;

(b) Key parameters for automatic waste feed cut-off systems;

(c) Communications or alarm systems;

(d) Response to fires or explosions;

(e) Response to ground-water contamination incidents; and

(f) Shutdown of operations.

4401.26 Facility personnel shall successfully complete the program required in §§4401.23 through 4401.25 within six (6) months after the effective date of this chapter or six (6) months after the date of their employment or assignment to a facility, or to a new position at a facility, whichever is later. Employees hired after the effective date of this chapter shall not work in unsupervised positions until they have completed the training requirements of §§4401.23 through 4401.25.

4401.27 Facility personnel shall take part in an annual review of the initial training required in §§4401.23 through 4401.25.

4401.28 The owner or operator shall maintain the following documents and records at the facility:

(a) The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job;

(b) A written job description for each position listed under §4401.28(a). This description may be consistent in its degree of specificity with descriptions for other similar positions in the same company location or bargaining unit, but

shall include the requisite skill, education, or other qualifications, and duties of employees assigned to each position;

(c) A written description of the type and amount of both introductory and continuing training that shall be given to each person filling a position listed under §4401.28(a); and

(d) Records that document that the training or job experience required under §§4401.23 through 4401.27 has been given to, and completed by, facility personnel.

4401.29 Training records on current personnel shall be kept until closure of the facility; training records on former employees shall be kept for at least three (3) years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company.

4401.30 The owner or operator shall take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste shall be separated and protected from sources of ignition or reaction, including, but not limited to, open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the owner or operator shall confine smoking and open flame to specially designated locations. "**NO SMOKING**" signs shall be conspicuously placed wherever there is a hazard from ignitable or reactive waste.

4401.31 The owner or operator of a facility that treats, stores or disposes ignitable or reactive waste, or mixes incompatible waste or incompatible wastes and other materials, shall take precautions to prevent reactions which:

(a) Generate extreme heat or pressure, fire or explosions, or violent reactions;

(b) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;

(c) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;

(d) Damage the structural integrity of a device or facility; or

(e) Through other like means threaten human health or the environment.

4401.32 When required to comply with §4401.30 or 4401.31, the owner or operator shall document that compliance. This documentation may be based on references to published scientific or engineering literature, data from trial tests (e.g., bench scale or pilot scale tests), waste analyses (as specified in §§4401.8 through 4401.13), or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions.

4401.33 New hazardous waste facilities shall not be located within sixty-one (61) meters (200 ft.) of a fault which has had displacement in Holocene time.

4401.34 A facility located in a one-hundred-year (100-yr.) floodplain shall be designed, constructed, operated and maintained to prevent washout of any hazardous waste by a one-hundred year (100-yr.) flood unless the owner or operator can demonstrate to the Director that procedures are in effect which shall cause the waste to be removed safely, before flood waters can reach the facility to a location where the wastes shall not be vulnerable to floodwaters, or for existing waste piles

and miscellaneous units, no adverse effects on human health or the environment will result if washout occurs, considering the following:

(a) The volume and physical and chemical characteristics of the waste in the facility;

(b) The concentration of hazardous constituents that would potentially affect surface waters as a result of washout;

(c) The impact of such concentrations on the current or potential uses of and water quality standards established for the affected surface waters; and

(d) The impact of hazardous constituents on the sediments of affected surface waters or the soils of the one-hundred year (100 yr.) floodplain that could result from washout.

SOURCE: Final Rulemaking published at 43 DCR 1077 (March 1, 1996), incorporating by reference the text of Chapters 40 through 54.

4402 PREPAREDNESS AND PREVENTION

4402.1 The regulations in §4402 shall apply to owners and operators of all hazardous waste facilities, except as §§4400.1 through 4400.7 provide otherwise.

4402.2 Facilities shall be designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

4402.3 All facilities shall be equipped with the following, unless it can be demonstrated to the Director that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified in this subsection:

(a) An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel;

(b) A device, such as a telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or local emergency response teams;

(c) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and

(d) Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems.

4402.4 All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, shall be tested and maintained as necessary to assure its proper operation in time of emergency.

4402.5 Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation shall have immediate access to an internal alarm or emergency communication device, either directly or through visual or

voice contact with another employee, unless the Director has ruled that such a device is not required under §4402.3.

4402.6 If there is only one employee at any time on the premises while the facility is operating, he or she shall have immediate access to a device, such as a telephone (immediately available at the scene of operation) or a hand-held two-way radio, capable of summoning external emergency assistance, unless the Director has ruled that such a device is not required under §4402.3.

4402.7 The owner or operator shall maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless it can be demonstrated to the Director that aisle space is not needed for any of these purposes.

4402.8 - 4402.10 [Reserved]

4402.11 The owner or operator shall attempt to make the following arrangements, as appropriate for the type of waste handled at his or her facility and the potential need for the services of these organizations:

(a) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes;

(b) Where more than one (1) police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority;

(c) Agreements with the District of Columbia emergency response teams, emergency response contractors, and equipment suppliers; and

(d) Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

4402.12 If the local authorities decline to enter into such arrangements, the owner or operator shall document the refusal in the operating record.

SOURCE: Final Rulemaking published at 43 DCR 1077 (March 1, 1996), incorporating by reference the text of Chapters 40 through 54.

4403 CONTINGENCY PLAN AND EMERGENCY PROCEDURES

4403.1 The regulations in §4403 shall apply to owners and operators of all hazardous waste facilities, except as §§4400.1 through 4400.7 provides otherwise.

4403.2 Each owner or operator shall have a contingency plan for his or her facility. The contingency plan shall be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water.

4403.3 The provisions of the plan shall be carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

4403.4 The contingency plan shall describe the actions facility personnel shall take to comply with §§4403.2 through 4403.3, and 4403.14 through 4403.24 in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility.

4403.5 If the owner or operator has already prepared a Spill Prevention, Control, and Countermeasures (SPCC) Plan in accordance with applicable Federal requirements, or some other emergency or contingency plan, he or she need only amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of this section.

4403.6 The plan shall describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and local emergency response teams to coordinate emergency services, pursuant to §§4402.11 and 4402.12.

4403.7 The plan shall list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator and this list shall be kept up to date. Where more than one person is listed, one shall be named as primary emergency coordinator and others shall be listed in the order in which they will assume responsibility as alternates. For new facilities, this information shall be supplied to the Director at the time of certification, rather than at the time of permit application.

4403.8 The plan shall include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required. This list shall be kept up-to-date. In addition, the plan shall include the location and a physical description of each item on the list, and a brief outline of its capabilities.

4403.9 The plan shall include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan shall describe signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes (in cases where the primary routes could be blocked by releases of hazardous waste or fires).

4403.10 A copy of the contingency plan and all revisions to the plan shall be:

(a) Maintained at the facility; and

(b) Submitted to all local police departments, fire departments, hospitals, and the District of Columbia emergency response teams that may be called upon to provide emergency services.

4403.11 The contingency plan shall be submitted to the Director with Part B of the permit application under Chapter 46 and, after modification or approval, shall become a condition of any permit issued.

4403.12 The contingency plan shall be reviewed, and immediately amended, if necessary, whenever the following occurs:

(a) The facility permit is revised;

(b) The plan fails in an emergency;

(c) The facility shall change its design, construction, operation, maintenance, or other circumstances in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;

(d) The list of emergency coordinators changes; or

(e) The list of emergency equipment changes.

4403.13 At all times, there shall be at least one (1) employee either on the facility premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures. The emergency coordinator shall be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person shall have the authority to commit the resources needed to carry out the contingency plan.

4403.14 Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his or her designee when the emergency coordinator is on call) shall immediately do the following:

(a) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and

(b) Notify appropriate District and other state agencies with designated response roles if their help is needed.

4403.15 Whenever there is a release, fire, or explosion, the emergency coordinator shall immediately identify the character, exact source, amount, and areal extent of any released materials. He or she may do this by observation or review of facility records or manifests, and, if necessary, by chemical analysis.

4403.16 Concurrently, the emergency coordinator shall assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment shall consider both direct and indirect effects of the release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-off from water or chemical agents used to control fire and heat-induced explosions).

4403.17 If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, he or she shall report his or her findings as follows:

(a) If his or her assessment indicates that evacuation of local areas may be advisable, he or she shall immediately notify appropriate local authorities. He or she shall be available to help appropriate officials decide whether local areas should be evacuated; and

(b) He or she shall immediately notify the Mayor's Command Center at (202) 727-6161. The report shall include the following:

(1) Name and telephone number of reporter;

(2) Name and address of facility;

(3) Time and type of incident (e.g., release, fire);

(4) Name and quantity of material(s) involved, to the extent known;

(5) The extent of injuries, if any; and

(6) The possible hazards to human health, or the environment, outside the facility.

4403.18 During an emergency, the emergency coordinator shall take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures shall include, where applicable, stopping processes and operations, collecting and containing release waste, and removing or isolating containers.

4403.19 If the facility stops operations in response to a fire, explosion, or release, the emergency coordinator shall monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

4403.20 Immediately after an emergency, the emergency coordinator shall provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.

4403.21 Unless the owner or operator can demonstrate, in accordance with §4100.13 or 4100.14, that the recovered material is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and shall manage it in accordance with all applicable requirements of Chapters 42, 43, and 44.

4403.22 The emergency coordinator shall ensure that in the affected area(s) of the facility:

(a) No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and

(b) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

4403.23 The owner or operator shall notify the Director, and appropriate District authorities, that the facility is in compliance with §4403.22 before operations are resumed in the affected area(s) of the facility.

4403.24 The owner or operator shall note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within fifteen (15) days after the incident, he or she shall submit a written report on the incident to the Director. The report shall include the following:

(a) Name, address, and telephone number of the owner or operator;

(b) Name, address, and telephone number of the facility;

(c) Date, time, and type of incident (e.g., fire, explosion);

(d) Name and quantity of material(s) involved;

(e) The extent of injuries, if any;

(f) An assessment of actual or potential hazards to human health or the environment, where this applies; and

(g) Estimated quantity and disposition of recovered material that resulted from the incident.

SOURCE: Final Rulemaking published at 43 DCR 1077 (March 1, 1996), incorporating by reference the text of Chapters 40 through 54.

4404 MANIFEST SYSTEM, RECORDKEEPING, AND REPORTING

4404.1 The regulations in §4404 shall apply to owners and operators of both on-site and off-site facilities, except as §§4400.1 through 4400.7 provides otherwise.

4404.2 Sections 4404.4 through 4404.8, and 4404.15 shall not apply to owners and operators of on-site facilities that do not receive any hazardous waste from off-site sources.

4404.3 Section 4404.10 shall apply only to permittees who treat, store or dispose of hazardous wastes on-site where such wastes were generated.

4404.4 If a facility receives hazardous waste accompanied by a manifest, the owner or operator, or his or her agent, shall do the following:

(a) Sign and date each copy of the manifest to certify that the hazardous waste covered by the manifest was received;

(b) Note any significant discrepancies (as defined in §4404.7) in the manifest on each copy of the manifest;

(c) Immediately give the transporter at least one (1) copy of the signed manifest;

(d) Within thirty (30) days after the delivery, send a copy of the manifest to the generator, the Department, and generator State if the waste was generated outside the District of Columbia; and

(e) Retain at the facility a copy of each manifest for at least three (3) years from the date of delivery.

4404.5 If a facility receives, from a rail or water (bulk shipment) transporter, hazardous waste which is accompanied by a shipping paper containing all the information required on the manifest (excluding the EPA Identification Numbers, generator's certification, and signatures), the owner or operator, or his or her agent, shall do the following:

(a) Sign and date each copy of the manifest or shipping paper (if the manifest has not been received) to certify that the hazardous waste covered by the manifest or shipping paper was received;

(b) Note any significant discrepancies (as defined in §4404.7) in the manifest or shipping paper (if the manifest has not been received) on each copy of the manifest or shipping paper;

(c) Immediately give the rail or water (bulk shipment) transporter at least one (1) copy of the manifest or shipping paper (if the manifest has not been received);

(d) Within thirty (30) days after the delivery, send a copy of the signed and dated manifest to the generator, the Department, and generator State if the waste was generated outside the District of Columbia; however, if the manifest has

not been received within thirty (30) days after delivery, the owner or operator, or his or her agent, shall send a copy of the shipping paper signed and dated to the generator; and

(e) Retain at the facility a copy of the manifest and shipping paper (if signed in lieu of the manifest at the time of delivery) for at least three (3) years from the date of delivery.

4404.6 Whenever a shipment of hazardous waste is initiated from a facility, the owner or operator of that facility shall comply with the requirements of Chapter 42 of this title.

4404.7 Manifest discrepancies are differences between the quantity or type of hazardous waste designated on the manifest or shipping paper, and the quantity or type of hazardous waste a facility actually receives. Significant discrepancies in quantity are as follows:

(a) For bulk waste, variations greater than ten percent (10%) in weight; and

(b) For batch waste, any variation in piece count, such as a discrepancy of one drum in a truckload. Significant discrepancies in type are obvious differences which can be discovered by inspection or waste analysis, such as waste solvent substituted for waste acid, or toxic constituents not reported on the manifest or shipping paper.

4404.8 Upon discovering a significant discrepancy, the owner or operator shall attempt to reconcile the discrepancy with the waste generator or transporter (e.g., with telephone conversations). If the discrepancy is not resolved within fifteen (15) days after receiving the waste, the owner or operator shall immediately submit to the Director a letter describing the discrepancy and attempts to reconcile it, and a copy of the manifest or shipping paper at issue.

4404.9 The owner or operator shall keep a written operating record at his or her facility.

4404.10 The following information shall be recorded, as it becomes available, and maintained in the operating record until closure of the facility:

(a) A description and the quantity of each hazardous waste received, and the method(s) and date(s) of its treatment, storage, or disposal at the facility as required by Appendix I of 40 CFR Part 264;

(b) The location of each hazardous waste within the facility and the quantity at each location. For disposal facilities, the location and quantity of each hazardous waste shall be recorded on a map or diagram of each cell or disposal area. For all facilities, this information shall include cross-references to specific manifest document numbers, if the waste was accompanied by a manifest;

(c) Records and results of waste analyses performed as specified in §§4401.8 through 4401.13, 4401.30 through 4401.32, and 40 CFR §268.7;

(d) Summary reports and details of all incidents that require implementing the contingency plan as specified in §4403.24;

(e) Records and results of inspections as required by §4401.22 (except these data need be kept only three (3) years);

(f) Monitoring, testing, or analytical data where required by §§4405, 4410.11 through 4410.12, and 4420.3;

(g) For off-site facilities, notices to generators as specified in §4401.5;

(h) All closure cost estimates under §§4407.5 through 4407.11, and if necessary, post-closure cost estimates under §§4407.13 through 4407.16; and

(i) A certification by the permittee no less often than annually that the permittee has a program in place to reduce the volume and toxicity of hazardous waste that is generated to the degree determined by the permittee to be economically practicable and the proposed method of treatment, storage, or disposal is that practicable method currently available to the permittee which minimizes the present and future threat to human health and the environment.

4404.11 All records, including plans, required under this chapter shall be furnished upon request, and made available at all reasonable times for inspection, by any officer, employee, or representative of the Department or EPA who is duly designated by the Director or the Administrator.

4404.12 The retention period for all records required under this chapter shall be extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by the Director or the Administrator.

4404.13 A copy of records of waste disposal locations and quantities under §4404.10(b) shall be submitted to the Director and local land authority upon closure of the facility.

4404.14 The owner or operator shall prepare and submit a single copy of a biennial report to the Director by March 1st of each year. The report form provided by the Department shall be used for this report. The biennial report shall cover facility activities during the previous calendar year and shall include the following information:

(a) The EPA Identification number, name, and address of the facility;

(b) The calendar year covered by the report;

(c) For off-site facilities, the EPA identification number of each hazardous waste generator from which the facility received a hazardous waste during the year; for imported shipments, the report shall give the name and address of the foreign generator;

(d) A description and the quantity of each hazardous waste the facility received during the year. For off-site facilities, this information shall be listed by EPA identification number of each generator;

(e) The method of treatment, storage, or disposal for each hazardous waste;

(f) [Reserved]

(g) The most recent closure cost estimate under §§4407.5 through 4407.11, and for disposal facilities, the most recent post-closure cost estimates under §§4407.13 through 4407.16;

(h) For generators who treat, store, or dispose of hazardous waste on-site, a description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated;

(i) For generators who treat, store or dispose of hazardous waste on-site, a description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years to the extent such information is available for the years prior to 1984; and

(j) The certification signed by the owner or operator of the facility or his or her authorized representative.

4404.15 If a facility accepts for treatment, storage or disposal, any hazardous waste from an off-site source without an accompanying manifest, or without an accompanying shipping paper as described in §4301.5(b), and if the waste is not excluded from the manifest requirement by §§4100.19 through 4100.28, then the owner or operator shall prepare and submit a single copy of an unmanifested waste report to the Director within fifteen (15) days after receiving the waste. The report shall be designated "*Unmanifested Waste Report*" and include the following information:

(a) The EPA identification number, name, and address of the facility;

(b) The date the facility received the waste;

(c) The EPA identification number, name, and address of the generator and the transporter, if available;

(d) A description and the quantity of each unmanifested hazardous waste and facility received;

(e) The method of treatment, or storage for each hazardous waste;

(f) The certification signed by the owner or operator of the facility or his or her authorized representative; and

(g) A brief explanation of why the waste was unmanifested, if known.

4404.16 In addition to submitting the biennial report and unmanifested waste reports described in §§4404.14 and 4404.15, the owner or operator shall also report to the Director the following:

(a) Releases, fires, and explosions as specified in §4403.24;

(b) Facility closure as specified in §4406.15; and

(c) As otherwise required by §§4405 and 4410.

SOURCE: Final Rulemaking published at 43 DCR 1077 (March 1, 1996), incorporating by reference the text of Chapters 40 through 54.

4405 RELEASES FROM SOLID WASTE MANAGEMENT UNITS

4405.1 Except as provided in §4405.3, the regulations in this section shall apply to owners or operators of facilities that treat, store or dispose of hazardous waste. The owner or operator shall satisfy the requirements identified in §4405.2 for all wastes (or constituents thereof) contained in solid waste management units at the facility, regardless of the time at which waste was placed in the units.

4405.2 All solid waste management units shall comply with the requirements in §§4405.55 through and 4405.57. A waste pile, that receives hazardous waste after July 26, 1982 (hereinafter referred to as a "regulated unit") shall comply with the requirements of §§4405.6 through 4405.54 in lieu of §§4405.55 through 4405.57 for purposes of detecting, characterizing and responding to releases to the uppermost aquifer. The financial responsibility requirements of §§4405.55 through 4405.57 shall apply to regulated units.

4405.3 The owner or operator's regulated unit or units are not subject to regulation for releases into the uppermost aquifer under this section if:

(a) The owner or operator is exempted under §§4400.1 through 4400.7;

(b) He or she operates a unit which the Regional Administrator finds as follows:

(1) Is an engineered structure;

(2) Does not receive or contain liquid waste or waste containing free liquids;

(3) Is designed and operated to exclude liquid, precipitation, and other run-on and run-off;

(4) Has both inner and outer layers of containment enclosing the waste;

(5) Has a leak detection system built into each containment layer;

(6) The owner or operator will provide continuing operation and maintenance of these leak detection systems during the active life of the unit and the closure and post-closure care periods; and

(7) To a reasonable degree of certainty, will not allow hazardous constituents to migrate beyond the outer containment layer prior to the end of the post-closure care period;

(c) The Director finds that there is no potential for migration of liquid from a regulated unit to the uppermost aquifer during the active life of the regulated unit (including the closure period) and the post-closure care period specified under §§4406.17 through 4406.21. This demonstration shall be certified by a qualified geologist or geotechnical engineer. In order to provide an adequate margin of safety in the prediction of potential migration of liquid, the owner or operator shall base any predictions made under this paragraph on assumptions that maximize the rate of liquid migration; and

(d) He or she designs and operates a pile in compliance with §4410.2.

4405.4 The regulations under this section shall apply during the active life of the regulated unit (including the closure period). After closure of the regulated unit, the regulations in this section:

(a) Do not apply if all waste, waste residues, contaminated containment system components, and contaminated subsoils are removed or decontaminated at closure;

(b) Apply during the post-closure care period under §§4406.17 through 4406.21 if the owner or operator is conducting a detection monitoring program under §§4405.29 through 4405.40; or

(c) Apply during the compliance period under §§4405.17 through 4405.19 if the owner or operator is conducting a compliance monitoring program under §§4405.41 through 4405.53 or a corrective action program under §4405.54.

4405.5 Regulations in §4405 may apply to miscellaneous units, when necessary to comply with §4420.

4405.6 Owners and operators subject to §4405 shall conduct a monitoring and response program as follows:

(a) Whenever hazardous constituents under §§4405.9 through 4405.11 from a regulated unit are detected at the compliance point under §§4405.15 and 4405.16, the owner or operator shall institute a compliance monitoring program under §§4405.41 through 4405.53;

(b) Whenever the ground-water protection standard under §4405.8 is exceeded, the owner or operator shall institute a corrective action program under §4405.54;

(c) Whenever hazardous constituents under §§4405.9 through 4405.11 from a regulated unit exceed concentration limits under §§4405.12 through 4405.14 in ground-water between the compliance point under §§4405.15 and 4405.16 and the downgradient facility property boundary, the owner or operator shall institute a corrective action program under §4405.54; or

(d) In all other cases, the owner or operator shall institute a detection monitoring program under §§4405.29 through 4405.40.

4405.7 The Director shall specify in the facility permit the specific elements of the monitoring and response program. The Director may include one or more of the programs identified in §4405.6 in the facility permit as may be necessary to protect human health and the environment and shall specify the circumstances under which each of the programs will be required. In deciding whether to require the owner or operator to be prepared to institute a particular program, the Director shall consider the potential adverse effects on human health and the environment that might occur before final administrative action on a permit modification application to incorporate such a program could be taken.

4405.8 The owner or operator shall comply with conditions specified in the facility permit that are designed to ensure that hazardous constituents under §§4405.9 through 4405.11 entering the ground-water from a regulated unit do not exceed the concentration limits under §§4405.12 through 4405.14 in the uppermost aquifer underlying the waste management area beyond the point of compliance under §§4405.15, and 4405.16 during the compliance period under §§4405.17 through 4405.19. The Director shall establish this ground-water protection standard in the facility permit when hazardous constituents have entered the ground-water from a regulated unit.

4405.9 The Director shall specify in the facility permit the hazardous constituents to which the ground-water protection standard of §4405.8 applies. Hazardous constituents are constituents identified in Appendix VIII of 40 CFR Part 261 that have been detected in ground-water in the uppermost aquifer underlying a regulated unit and that are reasonably expected to be in or derived from waste contained in a regulated unit, unless the Director has excluded them under §4405.10.

4405.10 The Director shall exclude an Appendix VIII constituent from the list of hazardous constituents specified in the facility permit if he or she finds that the constituent

is not capable of posing a substantial present or potential hazard to human health or the environment. In deciding whether to grant an exemption, the Director shall consider the following:

(a) Potential adverse effects on ground-water quality, considering:

(1) The physical and chemical characteristics of the waste in the regulated unit, including its potential for migration;

(2) The hydrogeological characteristics of the facility and surrounding land;

(3) The quantity of ground-water and the direction of ground-water flow;

(4) The proximity and withdrawal rates of ground-water users;

(5) The current and future uses of ground-water in the area;

(6) The existing quality of ground-water, including other sources of contamination and their cumulative impact on the ground-water quality;

(7) The potential for health risks caused by human exposure to waste constituents; and

(8) Potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents:

(A) The persistence and permanence of the potential adverse effects; and

(B) Potential adverse effects on hydraulically-connected surface water quality, considering:

(i) The volume and physical and chemical characteristics of the waste in the regulated unit;

(ii) The hydrogeological characteristics of the facility and surrounding land;

(iii) The quantity and quality of ground-water, and the direction of ground-water flow;

(iv) The patterns of rainfall in the region;

(v) The proximity of the regulated unit to surface waters;

(vi) The current and future uses of surface-waters in the area and any water quality standards established for those surface waters;

(vii) The existing quality of surface-water, including other sources of contamination and the cumulative impact on surface-water quality;

(viii) The potential for health risks caused by human exposure to waste constituents;

(ix) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and

(x) The persistence and permanence of the potential adverse effects.

4405.11 In making any determination under §4405.10 about the use of ground-water in the area around the facility, the Director shall consider any identification of underground sources of drinking water and exempted aquifers.

4405.12 The Director shall specify in the facility permit concentration limits in the ground-water for hazardous constituents established under §§4405.9 through 4405.11. The concentration of a hazardous constituent:

(a) Shall not exceed the background level of that constituent in the ground-water at the time that limit is specified in the permit;

(b) For any of the constituents listed in Table I, shall not exceed the respective value given in that table if the background level of the constituent is below the value given in Table I; or

(c) Shall not exceed an alternate limit established by the Director under §4405.13 of this section.

TABLE I

MAXIMUM CONCENTRATION OF CONSTITUENTS FOR GROUND-WATER PROTECTION

Constituent	Maximum Concentration[1]
Arsenic	0.05
Barium	1.0
Cadmium	0.01
Chromium	0.05
Lead	0.05
Mercury	0.002
Selenium	0.01
Silver	0.05
Endrin (1,2,3,4,10,10 -hexachloro- 1, 7 -epoxy- 1,4,4a,5,6,7,8,9a -octahydro- 1, 4 -endo, endo- 5,8 -dimethano napthalene)	0.0002
Lindane (1,2,3,4,5,6 -hexachlorocyclohexane, gamma isomer)	0.004

4405.12 (Continued)

Methoxychlor (1,1,1 -Trichloro- 2,2 -bis (p -methoxy-phenylethane)	0.1
Toxaphene (C10H10Cl6, Technical chlorinated camphene, 67-69 percent chlorine)	0.005
2,4 -D (2,4 -Dichlorophenoxyacetic acid	0.1
2,4,5 -TP Silvex (2,4,5-Trichlorophenoxypropionic acid	0.01

[1] Milligrams per liter

4405.13 The Director shall establish an alternate concentration limit for a hazardous constituent if he or she finds that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the alternate concentration limit is not exceeded. In establishing alternate concentration limits, the Director shall consider the following factors:

(a) The potential adverse effects on ground-water quality, considering:

(1) The physical and chemical characteristics of the waste in the regulated unit, including its potential for migration;

(2) The hydrogeological characteristics of the facility and surrounding land;

(3) The quantity of ground-water and the direction of ground-water flow;

(4) The proximity and withdrawal rates of ground-water users;

(5) The current and future uses of ground-water in the area;

(6) The existing quality of ground-water, including other sources of contamination and their cumulative impact on the ground-water quality;

(7) The potential for health risks caused by human exposure to waste constituents;

(8) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and

(9) The persistence and permanence of the potential adverse effects; and

(b) The potential adverse effects on hydraulically-connected surface-water quality, considering:

(1) The volume and physical and chemical characteristics of the waste in the regulated unit;

(2) The hydrogeological characteristics of the facility and surrounding land;

(3) The quantity and quality of ground-water, and the direction of ground-water flow;

(4) The patterns of rainfall in the region;

(5) The proximity of the regulated unit to surface-waters;

(6) The current and future uses of surface waters in the area and any water quality standards established for those surface-waters;

(7) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface water quality;

(8) The potential for health risks caused by human exposure to waste constituents;

(9) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and

(10) The persistence and permanence of the potential adverse effects.

4405.14 In making any determination under §4405.13 about the use of ground-water in the area around the facility the Director shall consider any identification of underground sources of drinking water and exempted aquifers.

4405.15 The Director shall specify in the facility permit the point of compliance at which the ground-water protection standard of §4405.8 applies and at which monitoring shall be conducted. The point of compliance is a vertical surface located at the hydraulically downgradient limit of the waste management area that extends down into the uppermost aquifer underlying the regulated units.

4405.16 The waste management area is the limit projected in the horizontal plane of the area on which waste will be placed during the active life of a regulated unit:

(a) The waste management area includes horizontal space taken up by any liner, dike, or other barrier designed to contain waste in a regulated unit; and

(b) If the facility contains more than one (1) regulated unit, the waste management area is described by an imaginary line, circumscribing all regulated units.

4405.17 The Director shall specify in the facility permit the compliance period during which the ground-water protection standard of §4405.8 applies. The compliance period is the number of years equal to the active life of the waste management area (including any waste management activity prior to permitting, and the closure period).

4405.18 The compliance period shall begin when the owner or operator initiates a compliance monitoring program meeting the requirements of §§4405.41 through 4405.53.

4405.19 If the owner or operator is engaged in a corrective action program at the end of the compliance period specified in §4405.15, the compliance period shall be extended until the owner or operator can demonstrate that the ground-water protection standard of §4405.8 has not been exceeded for a period of three (3) consecutive years.

4405.20 The owner or operator shall comply with the requirements of §§4405.21 through 4405.28 for any ground-water monitoring program developed to satisfy §§4405.29 through 4405.40, §§4405.41 through 4405.53, or §4405.54.

4405.21 The ground-water monitoring system shall consist of a sufficient number of wells, installed at appropriate locations and depths to yield ground-water samples from the uppermost aquifer that:

(a) Represent the quality of background-water that has not been affected by leakage from a regulated unit; and

(b) Represent the quality of ground-water passing the point of compliance.

4405.22 If a facility contains more than one (1) regulated unit, separate ground-water monitoring systems shall not be required for each regulated unit; Provided, that provisions for sampling the ground-water in the uppermost aquifer will enable detection and measurement at the compliance point of hazardous constituents from the regulated units that have entered the ground-water in the uppermost aquifer.

4405.23 All monitoring wells shall be cased in a manner that maintains the integrity of the monitoring-well bore hole. This casing shall be screened or perforated and packed with gravel or sand, where necessary, to enable collection of ground-water samples. The annular space (i.e., the space between the bore hole and well casing) above the sampling depth shall be sealed to prevent contamination of samples and the ground-water.

4405.24 The ground-water monitoring program shall include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide a reliable indication of ground-water quality below the waste management area. At a minimum, the program shall include procedures and techniques for the following:

(a) Sample collection;

(b) Sample preservation and shipment;

(c) Analytical procedures; and

(d) Chain of custody control.

4405.25 The ground-water monitoring program shall include sampling and analytical methods that are appropriate for ground-water sampling and that accurately measure hazardous constituents in ground-water samples.

4405.26 The ground-water monitoring program shall include a determination of the ground-water surface elevation each time ground-water is sampled.

4405.27 Where appropriate, the ground-water monitoring program shall establish background ground-water quality for each of the hazardous constituents or monitoring parameters or constituents specified in the permit:

(a) In the detection monitoring program under §4405.29, background ground-water quality for a monitoring parameter or constituent shall be based on data from quarterly sampling of wells upgradient from the waste management area for one (1) year;

(b) In the compliance monitoring program under §§4405.41 through 4405.53, background ground-water quality for a hazardous constituent shall be based on data from upgradient wells that:

(1) Is available before the permit is issued;

(2) Accounts for measurement errors in sampling and analysis; and

(3) Accounts, to the extent feasible, for seasonal fluctuations in background ground-water quality if such fluctuations are expected to affect the concentration of the hazardous constituent;

(c) Background quality may be based on sampling of wells that are not upgradient from the waste management area where:

(1) Hydrogeologic conditions do not allow the owner or operator to determine what wells are upgradient; or

(2) Sampling at other wells will provide an indication of background ground-water quality that is as representative or more representative than that provided by the upgradient wells; and

(d) In developing the data base used to determine a background value for each parameter or constituent, the owner or operator shall take a minimum of one (1) sample from each well and a minimum of four (4) samples from the entire system used to determine background ground-water quality, each time the system is sampled.

4405.28 The owner or operator shall use the following statistical procedure in determining whether background values or concentration limits have been exceeded:

(a) If, in a detection monitoring program, the level of a constituent at the compliance point is to be compared to the constituent's background value and that background value has a sample coefficient of variation less than 1.00:

(1) The owner or operator shall take at least four (4) portions from a sample at each well at the compliance point and determine whether the difference between the mean of the constituent at each well (using all portions taken) and the background value for the constituent is significant at the five one hundredths (0.05) level using the Cochran's Approximation to the Behrens-Fisher Student's t-test as described in Appendix IV of 40 CFR Part 264. If the test indicates that the difference is significant, the owner or operator shall repeat the same procedure (with at least the same number of portions as used in the first test) with a fresh sample from the monitoring well. If this second round of analyses indicates that the difference is significant, the owner or operator shall conclude that a statistically significant change has occurred; or

(2) The owner or operator may use an equivalent statistical procedure for determining whether a statistically significant change has occurred. The Director shall specify such a procedure in the facility permit if he or she finds that the alternative procedure reasonably balances the probability of falsely identifying a non-contaminating regulated unit and the probability of failing to identify a contaminating regulated unit in a manner that is comparable to that of the statistical procedure described in §4405.28(a)(1);

(b) In all other situations in a detection monitoring program and in a compliance monitoring program, the owner or operator shall use a statistical procedure providing reasonable confidence that the migration of hazardous constituents from a regulated unit into and through the aquifer will be indicated. The Director shall specify a statistical procedure in the facility permit that he or she finds:

(1) Is appropriate for the distribution of the data used to establish background values or concentration limits; and

(2) Provides a reasonable balance between the probability of falsely identifying a non-contaminating regulated unit and the probability of failing to identify a contaminating regulated unit.

4405.29 An owner or operator required to establish a detection monitoring program under §4405 shall, at a minimum, discharge the responsibilities outlined in §§4405.30 through 4405.40.

4405.30 The owner or operator shall monitor for indicator parameters (e.g., specific conductance, total organic carbon, or total organic halogen), waste constituents, or reaction products that provide a reliable indication of the presence of hazardous constituents in ground-water. The Director will specify the parameters or constituents to be monitored in the facility permit, after considering the following factors:

(a) The types, quantities, and concentrations of constituents in wastes managed at the regulated unit;

(b) The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the waste management area;

(c) The detectability of indicator parameters, waste constituents, and reaction products in ground-water; and

(d) The concentrations or values and coefficients of variation of proposed monitoring parameters or constituents in the ground-water background.

4405.31 The owner or operator shall install a ground-water monitoring system at the compliance point as specified under §§4405.15 and 4405.16. The ground-water monitoring system shall comply with §§4405.21(b), 4405.22, and 4405.23.

4405.32 The owner or operator shall establish a background value for each monitoring parameter or constituent specified in the permit pursuant to §4405.30. The permit shall specify the background values for each parameter or specify the procedures to be used to calculate the background values:

(a) The owner or operator shall comply with §4405.27 in developing the data base used to determine background values;

(b) The owner or operator shall express background values in a form necessary for the determination of statistically significant increases under §4405.28;

(c) In taking samples used in the determination of background values, the owner or operator shall use a ground-water monitoring system that complies with §§4405.21(a), 4405.22, and 4405.23.

4405.33 The owner or operator shall determine ground-water quality at each monitoring well at the compliance point at least semi-annually during the active life of a regulated unit (including the closure period) and the post-closure care period. The owner or operator shall express the ground-water quality at each monitoring well in a form necessary for the determination of statistically significant increases under §4405.28.

4405.34 The owner or operator shall determine the ground-water flow rate and direction in the uppermost aquifer at least annually.

4405.35 The owner or operator shall use, procedures and methods for sampling and analysis that meet the requirements of §§4405.24 and 4405.25.

4405.36 The owner or operator shall determine whether there is a statistically significant increase over background values for any parameter or constituent specified in the permit pursuant to §4405.30 each time he or she determines ground-water quality at the compliance point under §4405.33:

(a) In determining whether a statistically significant increase has occurred, the owner or operator shall compare the ground-water quality at each monitoring well at the compliance point for each parameter or constituent to the background value for that parameter or constituent, according to the statistical procedure specified in the permit under §4405.28; and

(b) The owner or operator shall determine whether there has been a statistically significant increase at each monitoring well at the compliance point within a reasonable time period after completion of sampling. The Director shall specify that time period in the facility permit, after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of ground-water samples.

4405.37 If the owner or operator determines, pursuant to §4405.36, that there is a statistically significant increase for parameters or constituents specified pursuant to §4405.30 at any monitoring well at the compliance point, he or she shall do the following:

(a) Notify the Director of this finding in writing within seven (7) days. The notification shall indicate what parameters or constituents have shown statistically significant increases;

(b) Immediately sample the ground-water in all monitoring wells and determine the concentration of all constituents identified in Appendix IX of 40 CFR Part 264 that are present in ground-water;

(c) Establish a background value for each constituent that has been found in the ground-water at each monitoring well at the compliance point:

(1) The owner or operator shall comply with §4405.27 in developing the data base used to determine background values;

(2) The owner or operator shall express background values in a form necessary for the determination of statistically significant increases under §4405.28; and

(3) In taking samples used in the determination of background values, the owner or operator shall use a ground-water monitoring system that complies with §§4405.21(a), 4405.22, and 4405.23;

(d) Within ninety (90) days, submit to the Director an application for a permit modification to establish a compliance monitoring program meeting the requirements of §§4405.41 through 4405.53. The application shall include the following information:

(1) An identification of the concentration of each constituent found in the ground-water at each monitoring well at the compliance point;

(2) Any proposed changes to the ground-water monitoring system at the facility necessary to meet the requirements of §§4405.41 through 4405.53;

(3) Any proposed changes to the monitoring frequency, sampling and analysis procedures or methods, or statistical procedures used at the facility necessary to meet the requirements of §§4405.41 through 4405.53;

(4) For each hazardous constituent found at the compliance point, a proposed concentration limit under §4405.12(a) or (b) or a notice of intent to seek a variance under §4405.13; and

(e) Within one hundred eighty (180) days, submit to the Director the following:

(1) All data necessary to justify any variance sought under 4405.13; and

(2) An engineering feasibility plan for a corrective action program necessary to meet the requirements of §4405.54, unless:

(A) All hazardous constituents identified under §4405.37(b) are listed in Table I of §4405.12 and their concentrations do not exceed the respective values given in that table; or

(B) The owner or operator has sought a variance under §4405.13 for every hazardous constituent identified under §4405.37(b).

4405.38 If the owner or operator determines, pursuant to §4405.36, that there is a statistically significant increase of parameters or constituents specified pursuant to §4405.30 at any monitoring well at the compliance point, he or she may demonstrate that a source other than a regulated unit caused the increase or that the increase resulted from error in sampling, analysis, or evaluation. While the owner or operator may make a demonstration under this subsection in addition to, or in lieu of, submitting a modification application under §4405.37(d), he or she is not relieved of the requirement to submit a permit modification application within the time specified in §4405.37(d) unless the demonstration made under this paragraph successfully shows that a source other than a regulated unit caused the increase or that the increase resulted from error in sampling, analysis, or evaluation. In making a demonstration under this subsection, the owner or operator shall do the following:

(a) Notify the Director in writing within seven (7) days of determining a statistically significant increase at the compliance point that he or she intends to make a demonstration under this subsection;

(b) Within ninety (90) days, submit a report to the Director which demonstrates that a source other than a regulated unit caused the increase, or that the increase resulted from error in sampling, analysis, or evaluation;

(c) Within ninety (90) days, submit to the Director an application for a permit modification to make any appropriate changes to the detection monitoring program at the facility; and

(d) Continue to monitor in accordance with the detection monitoring program established under this section.

4405.39 If the owner or operator determines that the detection monitoring program no longer satisfies the requirements of this section, he or she shall, within ninety (90)

days, submit an application for a permit modification to make any appropriate changes to the program.

4405.40 The owner or operator shall assure that monitoring and corrective action measures necessary to achieve compliance with the ground-water protection standard under §4405.8 are taken during the term of the permit.

4405.41 An owner or operator required to establish a compliance monitoring program under §4405 shall, at a minimum, discharge the following responsibilities outlined in §§4405.42 through 4405.53.

4405.42 The owner or operator shall monitor the ground-water to determine whether regulated units are in compliance with the ground-water protection standard under §4405.8. The Director shall specify the ground-water protection standard in the facility permit, including the following:

(a) A list of the hazardous constituents identified under §4405.9;

(b) Concentration limits under §§4405.12 through 4405.14 for each of those hazardous constituents;

(c) The compliance point under §§4405.15 and 4405.16; and

(d) The compliance period under §§4405.17 through 4405.19;

4405.43 The owner or operator shall install a ground-water monitoring system at the compliance point as specified under §§4405.15 and 4405.16. The ground-water monitoring system shall comply with §§4405.21(b), 4405.22, and 4405.23.

4405.44 Where a concentration limit established under §4405.42(b) is based on background ground-water quality, the Director shall specify the concentration limit in the permit as follows:

(a) If there is a high temporal correlation between upgradient and compliance point concentrations of the hazardous constituents, the owner or operator may establish the concentration limit through sampling at upgradient wells each time ground-water is sampled at the compliance point. The Director shall specify the procedures used for determining the concentration limit in this manner in the permit. In all other cases, the concentration limit will be the mean of the pooled data on the concentration of the hazardous constituent;

(b) If a hazardous constituent is identified on Table I under §4405.12 and the difference between the respective concentration limit in Table I and the background value of that constituent under §4405.27 is not statistically significant, the owner or operator shall use the background value of the constituent as the concentration limit. In determining whether this difference is statistically significant, the owner or operator shall use a statistical procedure providing reasonable confidence that a real difference will be indicated. The statistical procedure shall:

(1) Be appropriate for the distribution of the data used to establish background values; and

(2) Provide a reasonable balance between the probability of falsely identifying a significant difference and the probability of failing to identify a significant difference.

(c) The owner or operator shall do the following:

(1) Comply with §4405.27 in developing the data base used to determine background values;

(2) Express background values in a form necessary for the determination of statistically significant increases under §4405.28; and

(3) Use a ground-water monitoring system that complies with §§4405.21(a), 4405.22 and 4405.23.

4405.45 The owner or operator shall determine the concentration of hazardous constituents in ground-water at each monitoring well at the compliance point at least quarterly during the compliance period. The owner or operator shall express the concentration at each monitoring well in a form necessary for the determination of statistically significant increases under §4405.28.

4405.46 The owner or operator shall determine the ground-water flow rate and direction in the uppermost aquifer at least annually.

4405.47 The owner or operator shall analyze samples from all monitoring wells at the compliance point to determine whether constituents identified in Appendix IX of 40 CFR Part 264 are present and, if so, at what concentration. The analysis shall be conducted at least annually to determine whether additional Appendix IX constituents are present in the uppermost aquifer. If the owner or operator finds Appendix IX constituents in the ground-water that are not already identified in the permit as monitoring constituents, the owner or operator shall report the concentration of these additional constituents to the Director within seven (7) days after completion of the analysis.

4405.48 The owner or operator shall use procedures and methods for sampling and analysis that meet the requirements of §§4405.24 and 4405.25.

4405.49 The owner or operator shall determine whether there is a statistically significant increase over the concentration limits for any hazardous constituents specified in the permit pursuant to §4405.42 each time he or she determines the concentration of hazardous constituents in ground-water at the compliance point:

(a) In determining whether a statistically significant increase has occurred the owner or operator shall compare the ground-water quality at each monitoring well at the compliance point for each hazardous constituent to the concentration limit for that constituent according to the statistical procedures specified in the permit under §4405.28; and

(b) The owner or operator shall determine whether there has been a statistically significant increase at each monitoring well at the compliance point, within a reasonable time period after completion of sampling. The Director shall specify that time period in the facility permit, after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of ground-water samples.

4405.50 If the owner or operator determines, pursuant to §4405.49 that the ground-water protection standard is being exceeded at any monitoring well at the point of compliance, he or she shall do the following:

(a) Notify the Director of this finding in writing within seven (7) days. The notification shall indicate what concentration limits have been exceeded; and

(b) Submit to the Director an application for a permit modification to establish a corrective action program meeting the requirements of §4405.54 within one hundred eight (180) days, or within ninety (90) days if an engineering feasibility study has been previously submitted to the Director under §4405.37(e). The application shall, at a minimum, include the following information:

(1) A detailed description of corrective actions that will achieve compliance with the ground-water protection standard specified in the permit under §4405.42; and

(2) A plan for a ground-water monitoring program that will demonstrate the effectiveness of the corrective action. A ground-water monitoring program may be based on a compliance monitoring program developed to meet the requirements of this section.

4405.51 If the owner or operator determines, pursuant to §4405.49, that the ground-water protection standard is being exceeded at any monitoring well at the point of compliance, he or she may demonstrate that a source other than a regulated unit caused the increase or that the increase resulted from error in sampling, analysis or evaluation. While the owner or operator may make a demonstration under this paragraph in addition to, or in lieu of, submitting a permit modification application under §4405.50(b), he or she is not relieved of the requirement to submit a permit modification application within the time specified in §4405.50(b), unless the demonstration made under this paragraph successfully shows that a source other than a regulated unit caused the increase or that the increase resulted from error in sampling, analysis, or evaluation. In making a demonstration under this section, the owner or operator shall do the following:

(a) Notify the Director in writing within seven (7) days that he or she intends to make a demonstration under this section;

(b) Within ninety (90) days, submit a report to the Director which demonstrates that a source other than a regulated unit caused the standard to be exceeded or that the apparent noncompliance with the standards resulted from error in sampling, analysis, or evaluation;

(c) Within ninety (90) days, submit to the Director, an application for a permit modification to make any appropriate changes to the compliance monitoring program at the facility; and

(d) Continue to monitor in accordance with the compliance monitoring program established under this section.

4405.52 If the owner or operator determines that the compliance monitoring program no longer satisfies the requirements of this section, he or she shall, within ninety (90) days, submit an application for a permit modification to make any appropriate changes to the program.

4405.53 The owner or operator shall assure that monitoring and corrective action measures necessary to achieve compliance with the ground-water protection standard under §4405.8 are taken during the term of the permit.

4405.54 An owner or operator required to establish a corrective action program under this section shall, at a minimum, discharge the following responsibilities:

(a) The owner or operator shall take corrective action to ensure that regulated units are in compliance with the ground-water protection standard under

§4405.8. The Director shall specify the ground-water protection standard in the facility permit, including the following:

(1) A list of the hazardous constituents identified under §§4405.9 through 4405.11;

(2) Concentration limits under §§4405.12 through 4405.14 for each of those hazardous constituents;

(3) The compliance point under §§4405.15 and 4405.16; and

(4) The compliance period under §§4405.17 through 4405.19;

(b) The owner or operator shall implement a corrective action program that prevents hazardous constituents from exceeding their respective concentration limits at the compliance point by removing the hazardous waste constituents or treating them in place. The permit will specify the specific measures that will be taken;

(c) The owner or operator shall begin corrective action within a reasonable time period after the ground-water protection standard is exceeded. The Director shall specify that time period in the facility permit. If a facility permit includes a corrective action program in addition to a compliance monitoring program, the permit will specify when the corrective action will begin and such a requirement will operate in lieu of §4405.50(b);

(d) In conjunction with a corrective action program, the owner or operator shall establish and implement a ground-water monitoring program to demonstrate the effectiveness of the corrective action program. A monitoring program may be based on the requirements for a compliance monitoring program under §4405.41 and shall be as effective as that program in determining compliance with the ground-water protection standard under §4405.8 and in determining the success of a corrective action program under paragraph (e) of this section, where appropriate;

(e) In addition to the other requirements of this section, the owner or operator shall conduct a corrective action program to remove or treat in place any hazardous constituents under §§4405.9 through 4405.11 that exceed concentration limits under §§4405.12 through 4405.14 in ground-water:

(1) Between the compliance point under §§4405.15 through 4405.16 and the downgradient facility property boundary;

(2) Beyond the facility boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates to the satisfaction of the Director that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action. The owner/operator is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis;

(3) Corrective action measures shall be initiated and completed within a reasonable period of time considering the extent of contamination; and

(4) Corrective action measures under this paragraph may be terminated once the concentration of hazardous constituents under §§4405.9

through 4405.11 is reduced to levels below their respective concentration limits under §§4405.12 through 4405.14;

(f) The owner or operator shall continue corrective action measures during the compliance period to the extent necessary to ensure that the ground-water protection standard is not exceeded. If the owner or operator is conducting corrective action at the end of the compliance period, he or she shall continue that corrective action for as long as necessary to achieve compliance with the ground-water protection standard. The owner or operator may terminate corrective action measures taken beyond the period equal to the active life of the waste management area (including the closure period) if he or she can demonstrate, based on data from the ground-water monitoring program under paragraph (d) of this section, that the ground-water protection standard of §4405.8 has not been exceeded for a period of three (3) consecutive years;

(g) The owner or operator shall report in writing to the Director on the effectiveness of the corrective action program. The owner or operator shall submit these reports semi-annually; and

(h) If the owner or operator determines that the corrective action program no longer satisfies the requirements of this section, he or she shall, within ninety (90) days, submit an application for a permit modification to make any appropriate changes to the program.

4405.55 The owner or operator of a facility seeking a permit for the treatment, storage or disposal of hazardous waste shall institute corrective action as necessary to protect human health and the environment for all releases of hazardous waste or constituents from any solid waste management unit at the facility, regardless of the time at which waste was placed in the unit.

4405.56 Corrective action shall be specified in the permit. The permit shall contain schedules of compliance for such corrective action (where such corrective action cannot be completed prior to issuance of the permit) and assurances of financial responsibility for completing such corrective action.

4405.57 The owner or operator shall implement corrective actions beyond the facility boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates to the satisfaction of the Director that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action. The owner/operator is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis. Assurances of financial responsibility for corrective action shall be provided.

SOURCE: Final Rulemaking published at 43 DCR 1077 (March 1, 1996), incorporating by reference the text of Chapters 40 through 54.

4406 CLOSURE AND POST-CLOSURE

4406.1 Except as §§4400.1 through 4400.7 provide otherwise, §4406 shall apply to the owners and operators of all hazardous waste management facilities.

4406.2 The owner or operator shall close the facility in a manner that:

(a) Minimizes the need for further maintenance;

(b) Controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere; and

(c) Complies with the closure requirements of §4406, including, but not limited to, the requirements of §§4408.17, 4409.32 through 4409.34, 4410.17 through 4410.20, and 4420.2 through 4420.4.

4406.3 The owner or operator of a hazardous waste management facility shall have a written closure plan. In addition, certain waste piles from which the owner or operator intends to remove or decontaminate the hazardous waste at partial or final closure are required to have contingent closure plans. The plan shall be submitted with the permit application, in accordance with §4601.26(m) of this chapter, and approved by the Director as part of the permit issuance procedures under Chapter 47. In accordance with §§4602.3 through 4602.8 of this chapter, the approved closure plan will become a condition of any HWMA permit.

4406.4 The Director's approval of the plan shall ensure that the approved closure plan is consistent with §§4406.2 through 4406.16 and the applicable requirements of §§4405.1 through 4405.5 *et seq.*, 4408.17 and 4408.18, 4409.32 through 4409.34, 4410.17 through 4410.20, and 4420.2. Until final closure is completed and certified in accordance with §4406.15, and 4406.16, a copy of the approved plan and all approved revisions shall be furnished to the Director upon request, including request by mail.

4406.5 The plan shall identify steps necessary to perform partial or final closure of the facility at any point during its active life. The closure plan shall include, at least, the following:

(a) A description of how each hazardous waste management unit at the facility will be closed in accordance with §4406.2;

(b) A description of how final closure of the facility will be conducted in accordance with §4406.2. The description shall identify the maximum extent of the operations which will be unclosed during the active life of the facility;

(c) An estimate of the maximum inventory of hazardous wastes ever on-site over the active life of the facility and a detailed description of the methods to be used during partial closures and final closure, including, but not limited to, methods for removing, transporting, treating, storing, or disposing of all hazardous wastes, and identification of the type(s) of the off-site hazardous waste management units to be used, if applicable;

(d) A detailed description of the steps needed to remove or decontaminate all hazardous waste residues and contaminated containment system components, equipment, structures, and soils during partial and final closure, including, but not limited to, procedures for cleaning equipment and removing contaminated soils, methods for sampling and testing surrounding soils, and criteria for determining the extent of decontamination required to satisfy the closure performance standard;

(e) A detailed description of other activities necessary during the closure period to, ensure that all partial closures and final closure satisfy the closure performance standards, including, but not limited to, ground-water monitoring, leachate collection, and run-on and run-off control;

(f) A schedule for closure of each hazardous waste management unit and for final closure of the facility. The schedule shall include, at a minimum, the total time required to close each hazardous waste management unit and the time required for intervening closure activities which will allow tracking of the progress of partial and final closure (*For example, in the case of a landfill unit, estimates of the time required to treat or dispose of all hazardous waste inventory and of the time required to place a final cover shall be included.*); and

(g) For facilities that use trust funds to establish financial assurance under §4407.12 or 4407.17 and that are expected to close prior to the expiration of the permit, an estimate of the expected year of final closure.

4406.6 The owner or operator shall submit a written request for a permit modification to authorize a change in operating plans, facility design, or the approved closure plan in accordance with the procedures in Chapters 46 and 47. The written request shall include a copy of the amended closure plan for approval by the Director:

(a) The owner or operator may submit a written request to the Director for a permit modification to amend the closure plan at any time prior to the notification of partial or final closure of the facility;

(b) The owner or operator shall submit a written request for a permit modification to authorize a change in the approved closure plan whenever the following occurs:

(1) Changes in operating plans or facility design affect the closure plan;

(2) There is a change in the expected year of closure, if applicable; or

(3) In conducting partial or final closure activities, unexpected events require a modification of the approved closure plan.

(c) The owner or operator shall submit a written request for a permit modification including a copy of the amended closure plan for approval at least sixty (60) days prior to the proposed change in facility design or operation, or no later than sixty (60) days after an unexpected event has occurred which has affected the closure plan. If an unexpected event occurs during the partial or final closure period, the owner or operator shall request a permit modification no later than thirty (30) days after the unexpected event. The Director will approve, disapprove, or modify this amended plan in accordance with the procedures in Chapters 46 and 47. In accordance with §§4602.3 through 4602.8, the approved closure plan will become a condition of any HWMA permit issued; and

(d) The Director may request modifications to the plan under the conditions described in §4406.6(b). The owner or operator shall submit the modified plan within sixty (60) days of the Director's request, or within thirty (30) days if the change in facility conditions occurs during partial or final closure. Any modifications requested by the Director will be approved in accordance with the procedures in Chapters 46 and 47.

4406.7 The owner or operator shall notify the Director in writing at least sixty (60) days prior to the date on which he or she expects to begin closure of a waste pile, or final closure of a facility with such a unit. The owner or operator shall notify the Director in writing at least forty-five (45) days prior to the date on which he or she expects to begin final closure of a facility with only treatment or storage tanks, container storage, or incinerator units to be closed.

4406.8 The date when the owner or operator "expects to begin closure" shall be either no later than thirty (30) days after the date on which any hazardous waste management unit receives the known final volume of hazardous wastes or, if there is a reasonable possibility that the hazardous waste management unit will receive additional hazardous wastes, no later than one (1) year after the date on which the unit received the most recent volume of hazardous waste. If the owner or operator of a hazardous waste management unit can demonstrate to the Director that the hazardous waste management unit or facility has the capacity to receive additional hazardous wastes and he or she has taken, and will continue to take, all steps to prevent threats to human health and the environment, including compliance with all applicable permit requirements, the Director may approve an extension to this one-year (1 yr.) limit.

4406.9 If the facility's permit is terminated, or if the facility is otherwise ordered, by judicial decree or final order under HWMA, to cease receiving hazardous wastes or to close, then the requirements of this paragraph shall not apply. However, the owner or operator shall close the facility in accordance with the deadlines established in §§4406.11 through 4406.13.

4406.10 Nothing in this section shall preclude the owner or operator from removing hazardous wastes and decontaminating or dismantling equipment in accordance with the approved partial or final closure plan at any time before or after notification of partial or final closure.

4406.11 Within ninety (90) days after receiving the final volume of hazardous wastes at a hazardous waste management unit or facility, the owner or operator shall treat, remove from the unit or facility, or dispose of on-site, all hazardous wastes in accordance with the approved closure plan. The Director may approve a longer period if the owner or operator complies with all applicable requirements for requesting a modification to the permit and demonstrates that:

(a) The activities required to comply with this paragraph will, of necessity, take longer than ninety (90) days to complete;

(b) The hazardous waste management unit or facility has the capacity to receive additional hazardous wastes;

(c) There is a reasonable likelihood that he or she or another person will recommence operation of the hazardous waste management unit or the facility within one (1) year;

(d) Closure of the hazardous waste management unit or facility would be incompatible with continued operation of the site; and

(e) He or she has taken and will continue to take all steps to prevent threats to human health and the environment, including compliance with all applicable permit requirements.

4406.12 The owner or operator shall complete partial and final closure activities in accordance with the approved closure plan and within one hundred eighty (180) days after receiving the final volume of hazardous wastes at the hazardous waste management unit or facility. The Director may approve an extension to the closure period if the owner or operator complies with all applicable requirements for requesting a modification to the permit and demonstrates that:

(a) The partial or final closure activities will, of necessity, take longer than one hundred eighty (180) days to complete;

(b) The hazardous waste management unit or facility has the capacity to receive additional hazardous wastes;

(c) There is reasonable likelihood that he or she or another person will recommence operation of the hazardous waste management unit or the facility within one year (1 yr.) ;

(d) Closure of the hazardous waste management unit or facility would be incompatible with continued operation of the site; and

(e) He or she has taken and will continue to take all steps to prevent threats to human health and the environment from the unclosed, but not operating hazardous waste management unit or facility, including compliance with all applicable permit requirements.

4406.13 The demonstrations referred to in §§4406.11 and 4406.12 shall be made as follows:

(a) The demonstrations in §4406.11 must be made at least thirty (30) days prior to the expiration of the ninety-day (90) period in §4406.11 and

(b) The demonstration in §4406.12 must be made at least thirty (30) days prior to the expiration of the one-hundred-eighty-day (180) period in §4406.12.

4406.14 During the partial and final closure periods, all contaminated equipment, structures and soils shall be properly disposed of or decontaminated unless otherwise specified in §§4410.17 through 4410.20, 4420.2, and 4420.4. By removing any hazardous wastes or hazardous constituents during partial and final closure, the owner or operator may become a generator of hazardous waste and must handle that waste in accordance with all applicable requirements of Chapter 42.

4406.15 Within sixty (60) days of completion of closure of each hazardous waste pile, and within sixty (60) days of the completion of final closure, the owner or operator shall submit to the Director by registered mail, a certification that the hazardous waste management unit or facility, as applicable, has been closed in accordance with the specifications in the approved closure plan. The certification shall be signed by the owner or operator and by an independent registered professional engineer. Documentation supporting the independent registered professional engineer's certification shall be furnished to the Director upon request until he or she releases the owner or operator from the financial assurance requirements for closure under §4407.12(i).

4406.16 No later than the submission of the certification of closure of each hazardous waste treatment or storage unit, the owner or operator shall submit to the Director, a survey plat indicating the location and dimensions of hazardous waste treatment or storage units with respect to permanently surveyed benchmark. This plat shall be prepared and certified by a professional land surveyor. The plat filed with the local zoning authority, or the authority with jurisdiction over local land use, must contain a note, prominently displayed, which states the owner's or operator's obligation to restrict disturbance of the hazardous waste disposal unit in accordance with the applicable regulations of §4406.

4406.17 Post-closure care for each hazardous waste management unit subject to the requirements of §§4406.16 through 4406.29, and 4406.31 shall begin after completion of closure of the unit and continue for thirty years (30 yrs.)after that date and shall consist of at least the following:

(a) Monitoring and reporting in accordance with the requirements of §§4405, 4410 and 4420; and

(b) Maintenance and monitoring of waste containment systems in accordance with the requirements of §§4405, 4410 and 4420.

4406.18 Any time preceding partial closure of a hazardous waste management unit subject to post-closure care requirements or final closure, or any time during the post-closure period for a particular unit, the Director may, in accordance with the permit modification procedures in Chapters 46 and 47:

(a) Shorten the post-closure care period applicable to the hazardous waste management unit, or facility, if all units have been closed, if he or she finds that the reduced period is sufficient to protect human health and the environment (*For example, leachate or ground-water monitoring results, characteristics of the hazardous wastes, application of advanced technology, or alternative disposal, treatment, or reuse techniques indicate that the hazardous waste management unit or facility is secure.*); or

(b) Extend the post-closure care period applicable to the hazardous waste management unit or facility if he or she finds that the extended period is necessary to protect human health and the environment (*For example, leachate or ground-water monitoring results indicate a potential for migration of hazardous wastes at levels which may be harmful to human health and the environment.*);

4406.19 The Director may require, at partial and final closure, continuation of any of the security requirements of §§4401.15 through 4401.17 during part or all of the post-closure period when:

(a) Hazardous wastes may remain exposed after completion of partial or final closure; or

(b) Access by the public or domestic livestock may pose a hazard to human health.

4406.20 Hazardous waste shall not remain on property after final closure.

4406.21 All post-closure care activities shall be in accordance with the provisions of the approved post-closure plan as specified in §§4406.22 through 4406.25.

4406.22 The owner or operator of a hazardous waste management unit shall have a written post-closure plan. In addition, certain hazardous waste management units from which the owner or operator intends to remove or decontaminate the hazardous wastes at partial or final closure are required to have contingent post-closure plans. The plan shall be submitted with the permit application, in accordance with §4601.26(m) of this subtitle, and approved by the Director as part of the permit issuance procedures under Chapter 47. In accordance with §§4602.3 through 4602.8 of this subtitle, the approved post-closure plan will become a condition of any HWMA permit issued.

4406.23 For each hazardous waste management unit subject to the requirements of §§4406.22 through 4406.25, the post-closure plan shall identify the activities that will be carried on after closure of each disposal unit and the frequency of these activities, and include at least the following:

(a) A description of the planned monitoring activities and frequencies at which they will be performed to comply with §§4405, 4410, and 4420 during the post-closure care period; and

(b) A description of the planned maintenance activities, and frequencies at which they will be performed, to ensure the following:

(1) The integrity of the cap and final cover or other containment systems in accordance with the requirements of §§4405, 4410, and 4420;

(2) The function of the monitoring equipment in accordance with the requirements of §§4405, 4410, and 4420; and

(3) The name, address, and phone number of the person or office to contact about the hazardous waste disposal unit or facility during the post-closure care period.

4406.24 Until final closure of the facility, a copy of the approved post-closure plan shall be furnished to the Director upon request, including request by mail. After final closure has been certified, the person or office specified in §4406.23(b)(3) shall keep the approved post-closure plan during the remainder of the post-closure period.

4406.25 The owner or operator shall request a permit modification to authorize a change in the approved post-closure plan in accordance with the applicable requirements of Chapters 46 and 47. The written request shall include a copy of the amended post-closure plan for approval by the Director:

(a) The owner or operator may submit a written request to the Director for a permit modification to amend the post-closure plan at any time during the active life of the facility or during the post-closure care period;

(b) The owner or operator shall submit a written request for a permit modification to authorize a change in the approved post-closure plan whenever:

(1) Changes in operating plans or facility design affect the approved post-closure plan;

(2) There is a change in the expected year of final closure, if applicable; or

(3) Events which occur during the active life of the facility, including partial and final closures, affect the approved post-closure plan;

(c) The owner or operator shall submit a written request for a permit modification at least sixty (60) days prior to the proposed change in facility design or operation, or no later than sixty (60) days after an unexpected event has occurred which has affected the post-closure plan. An owner or operator of a waste pile shall submit a post-closure plan within ninety (90) days after the owner or operator or the Director determines that the waste pile must be closed as a landfill, subject to the requirements of §§4406.30 and 4406.31. The Director will approve, disapprove or modify this plan in accordance with the procedures in Chapters 46 and 47. In accordance with §4602.3 through 4602.8 of this subtitle, the approved post-closure plan will become a permit condition; and

(d) The Director may request modifications to the plan under the conditions described in §4406.25(b). The owner or operator must submit the modified plan no later than sixty (60) days after the Director's request, or no later than ninety (90) days if the unit is a waste pile not previously required to prepare a contingent post-closure plan. Any modifications requested by the Director will be approved, disapproved, or modified in accordance with the procedures in Chapters 46 and 47.

4406.26 No later than sixty (60) days after certification of closure of each hazardous waste unit, the owner or operator shall submit to the Director a record of the type, location, and quantity of hazardous wastes within each unit of the facility.

4406.27 Within sixty (60) days of certification of closure of the first hazardous waste unit and within sixty (60) days of certification of closure of the last hazardous waste unit, the owner or operator shall do the following:

(a) Record, in accordance with the District of Columbia law, a notation on the deed to the facility property or on some other instrument which is normally examined during title search that will in perpetuity notify any potential purchaser of the property, the following:

(1) The land has been used to manage hazardous wastes;

(2) Its use is restricted under §4406 of this section; and

(3) The survey plat and record of the type, location, and quantity of hazardous wastes disposed of within each cell or other hazardous waste disposal unit of the facility required by §§4406.16 and 4406.26 through 4406.28 have been filed with the local zoning authority or the authority with jurisdiction over local land use and with the Director; and

(b) Submit a certification, signed by the owner or operator, that he or she has recorded the notation specified in §4406.27(a) including a copy of the document in which the notation has been placed, to the Director.

4406.28 If the owner or operator or any subsequent owner or operator of the land upon which a hazardous waste disposal unit is located wishes to remove hazardous wastes and hazardous waste residues, the liner, if any, or contaminated soils, he or she must request a modification to the post-closure permit in accordance with the applicable requirements in Chapters 46 and 47. The owner or operator shall demonstrate that the removal of hazardous wastes will satisfy the criteria of §4406.20. By removing hazardous waste, the owner or operator may become a generator of hazardous waste and shall manage it in accordance with all applicable requirements of Chapter 42. If he or she is granted a permit modification or otherwise granted approval to conduct the removal activities, the owner or operator may request that the Director approve either:

(a) The removal of the notation on the deed to the facility property or other instrument normally examined during title search; or

(b) The addition of a notation to the deed or instrument indicating the removal of the hazardous waste.

4406.29 No later than sixty (60) days after completion of the established post-closure care period for each hazardous waste disposal unit, the owner or operator must submit to the Director by registered mail, a certification that the post-closure care period for the hazardous waste disposal unit was performed in accordance with the specifications in the approved post-closure plan. The certification must be signed

by the owner or operator and an independent registered professional engineer. Documentation supporting the independent registered professional engineer's certification must be furnished to the Director upon request until he or she releases the owner or operator from the financial assurance requirements for post-closure care under §4407.17(i).

4406.30 At final closure of a hazardous waste management unit, if, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment, the owner or operator or the Director finds that not all contaminated subsoils can be practicably removed or decontaminated, the owner or operator shall cover the unit with a final cover designed and constructed to do the following:

(a) Provide long-term minimization of migration of liquids through the closed unit;

(b) Function with minimum maintenance;

(c) Promote drainage and minimize erosion or abrasion of the cover;

(d) Accommodate settling and subsidence so that the cover's integrity is maintained; and

(e) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

4406.31 After final closure a hazardous waste management unit, if, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment, the owner or operator or the Director finds that not all contaminated subsoils can be practicably removed or decontaminated, the owner or operator shall comply with all post-closure requirements contained in §§4406.17 through 4406.29, including maintenance and monitoring throughout the post-closure care period (specified in the permit under §§4406.17 through 4406.21). The owner or operator shall do the following:

(a) Maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events;

(b) Continue to operate the leachate collection and removal system until leachate is no longer detected;

(c) Maintain and monitor the ground-water monitoring system and comply with all other applicable requirements of §4405 of this chapter;

(d) Prevent run-on and run-off from eroding or otherwise damaging the final cover; and

(e) Protect and maintain surveyed benchmarks used in complying with §4406.16.

SOURCE: Final Rulemaking published at 43 DCR 1077 (March 1, 1996), incorporating by reference the text of Chapters 40 through 54.

4407 FINANCIAL REQUIREMENTS

4407.1 The requirements of §§4407.5 through 4407.12, and 4407.19 through 4407.26 shall apply to owners and operators of all hazardous waste facilities, except as provided otherwise in this subsection or in §§4400.1 through 4400.7.

4407.2 The requirements of §§4407.13 through 4407.17 shall apply only to owners and operators of wastepiles, tank systems.

4407.3 The District and the Federal government are exempt from the requirements of this section.

4407.4 [Reserved]

4407.5 The owner or operator shall prepare a written estimate, in current dollars, of the cost of closing the facility in accordance with the requirements in §§4406.1 through 4406.15 and applicable closure requirements in §§4408.17, 4409.32 through 4409.34, 4410.17 through 4410.20, 4411.26, and 4420.1 through 4420.4. The estimate shall equal the cost of final closure at the point in the facility's active life when the extent and manner of its operation would make closure the most expensive, as indicated by its closure plan.

4407.6 The closure cost estimate shall be based on the costs to the owner or operator of hiring a third party to close the facility. A third party is a party who is neither a parent nor a subsidiary of the owner or operator. (See definition of parent corporation in Chapter 54).

4407.7 The closure cost estimate shall not incorporate any salvage value that may be realized with the sale of hazardous wastes, facility structures or equipment, land, or other assets associated with the facility at the time of partial or final closure.

4407.8 The owner or operator shall not incorporate a zero cost for hazardous wastes that might have economic value.

4407.9 During the active life of the facility, the owner or operator shall adjust the closure cost estimate for inflation within sixty (60) days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with §4407.12. For owners and operators using the financial test or corporate guarantee, the closure cost estimate shall be updated for inflation within thirty (30) days after the close of the firm's fiscal year and before submission of updated information to the Director as specified in §4407.12(f)(4). The adjustment may be made by recalculating the maximum costs of closure in current dollars, or by using an inflation factor derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its Survey of Current Business, as specified in paragraphs (a) and (b) of this subsection. The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year:

(a) The first adjustment is made by multiplying the closure cost estimate by the inflation factor. The result is the adjusted closure cost estimate; and

(b) Subsequent adjustments are made by multiplying the latest adjusted closure cost estimate by the latest inflation factor;

4407.10 During the active life of the facility, the owner or operator shall revise the closure cost estimate no later than thirty (30) days after the Director has approved the request to modify the closure plan, if the change in the closure plan increases the cost of closure. The revised closure cost estimate shall be adjusted for inflation as specified in §4407.9.

4407.11 The owner or operator shall keep the following at the facility during the operating life of the facility:

(a) The latest closure cost estimate prepared in accordance with §§4407.5 through 4407.8, and 4407.10; and

(b) When this estimate has been adjusted in accordance with §4407.9, the latest adjusted closure cost estimate.

4407.12 An owner or operator of each facility shall establish financial assurance for closure of the facility. He or she shall choose from the options as specified paragraph (a) though (f) of this subsection:

(a) An owner or operator may satisfy the requirements of this section by establishing a closure trust fund which conforms to the requirements of this paragraph and submitting an originally signed duplicate of the trust agreement to the Director. An owner or operator of a new facility shall submit the originally signed duplicate of the trust agreement to the Director at least sixty (60) days before the date on which hazardous waste is first received for treatment, storage or disposal. The trustee shall be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or state agency:

(1) The wording of the trust agreement shall be identical to the wording specified in §4407.22(a) and the trust agreement shall be accompanied by a formal certification of acknowledgment. Schedule A of the trust agreement shall be updated within sixty (60) days after a change in the amount of the current closure cost estimate covered by the agreement;

(2) Payments into the trust fund shall be made annually by the owner or operator over the term of the initial HWMA permit or over the remaining operating life of the facility as estimated in the closure plan, whichever period is shorter; this period is hereafter referred to as the "pay-in period." The payments into the closure trust fund shall be made as follows:

(A) For a new facility, the first payment shall be made before the initial receipt of hazardous waste for treatment, storage, or disposal. A receipt from the trustee for this payment shall be submitted by the owner or operator to the Director before this initial receipt of hazardous waste. The first payment shall be at least equal to the current closure cost estimate, except as provided in §4407.12(g), divided by the number of years in the pay-in period. Subsequent payments shall be made no later than thirty (30) days after each anniversary date of the first payment. The amount of each subsequent payment shall be determined by this formula:

Next payment = [CE-CV]/Y

where CE is the current closure cost estimate, CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period;

(B) If an owner or operator establishes a trust fund as specified in §4407.12(a) and the value of that trust fund is less than the current closure cost estimate when a permit is awarded for the facility, the amount of the current closure cost estimate still to be paid into the trust fund shall be paid in over the pay-in period as defined in §4407.12(a)(2). Payments shall continue to be made no later than thirty (30) days after each anniversary date of the first payment made pursuant to this section. The amount of each payment shall be determined by this formula:

Next payment = [CE-CV]/Y

where CE is the current closure cost estimate, CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period;

(3) The owner or operator may accelerate payments into the trust fund or he or she may deposit the full amount of the current closure cost estimate at the time the fund is established. However, he or she shall maintain the value of the fund at no less than the value that the fund would have if annual payments were made as specified in §4407.12(a)(2);

(4) If the owner or operator establishes a closure trust fund after having used one or more alternate mechanisms specified in this section or in §§4407.12, his or her first payment shall be in at least the amount that the fund would contain if the trust fund were established initially and annual payments made according to specifications of this paragraph and §4407.12(a), as applicable;

(5) After the pay-in period is completed, whenever the current closure cost estimate changes, the owner or operator shall compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the owner or operator, within sixty (60) days after the change in the cost estimate, shall either deposit an amount into the fund so that its value after this deposit at least equals the amount of the current closure cost estimate, or obtain other financial assurance as specified in this section to cover the difference;

(6) If the value of the trust fund is greater than the total amount of the current closure cost estimate, the owner or operator may submit a written request to the Director for release of the amount in excess of the current closure cost estimate;

(7) If an owner or operator substitutes other financial assurance as specified in this section for all or part of the trust fund, he or she may submit a written request to the Director for release of the amount in excess of the current closure cost estimate covered by the trust fund;

(8) Within sixty (60) days after receiving a request from the owner or operator for release of funds as specified in §4407.12(a)(6) or §4407.12(a)(7), the Director shall instruct the trustee to release to the owner or operator such funds as the Director specifies in writing;

(9) After beginning partial or final closure, an owner or operator or any other person authorized to perform partial or final closure may request reimbursement for partial or final closure expenditures by submitting itemized bills to the Director. The owner or operator may request reimbursements for partial closure only if sufficient funds are remaining in the Trust fund to cover the maximum cost of closing the facility over its remaining operating life. Within sixty (60) days after receiving bills for partial or final closure activities, the Director shall determine whether the closure expenditures are in accordance with the closure plan or otherwise justified, and if so, he or she shall instruct the trustee to make reimbursement in such amounts as the Director specifies in writing, if the Director determines the partial or final closure expenditures are in accordance with the approved closure plan or otherwise justified. If the Director has reason to believe that the maximum cost of closure over the remaining life of the facility will be significantly greater than the value of the trust fund, he or she may withhold reimbursement of such amounts as he or she deems prudent until he or she determines, in accordance with §4407.12(i), that the owner or operator is no longer required to maintain financial assurance for closure. If the Director does not instruct the trustees to make the reimbursements he or she will provide the owner or operator with a detailed written statement of reasons;

(10) The Director shall agree to termination of the trust when:

(A) An owner or operator substitutes alternate financial assurance as specified in this section; or

(B) The Director releases the owner or operator from the requirements of this section in accordance with §4407.12(i);

(b) An owner or operator may satisfy the requirements of this section by obtaining a surety bond guaranteeing payment into a closure trust fund which conforms to the requirements of this paragraph and submitting the bond to the Director. An owner or operator of a new facility shall submit the bond to the Director at least sixty (60) days before the date on which hazardous waste is first received for treatment, storage or disposal. The bond shall be effective before this initial receipt of hazardous waste. The surety company issuing the bond shall, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury:

(1) The wording of the surety bond shall be identical to the wording specified in §4407.22(b);

(2) The owner or operator who uses a surety bond to satisfy the requirements of this section shall also establish a standby trust fund. Under the terms of the bond, all payments made thereunder shall be deposited by the surety directly into the standby trust fund in accordance with instructions from the Director. This standby trust fund shall meet the requirements specified in §4407.12(a), except that:

(A) An originally signed duplicate of the trust agreement shall be submitted to the Director with the surety bond; and

(B) Until the standby trust fund is funded pursuant to the requirements of this section, the following are not required by this chapter:

(i) Payments into the trust fund as specified in §4407.12(a);

(ii) Updating of Schedule A of the trust agreement (see §4407.22(a)) to show current closure cost estimates;

(iii) Annual valuations as required by the trust agreement; and

(iv) Notices of nonpayment as required by the trust agreement;

(3) The bond shall guarantee that the owner or operator will do the following:

(A) Fund the standby trust fund in an amount equal to the penal sum of the bond before the beginning of final closure of the facility;

(B) Fund the standby trust fund in an amount equal to the penal sum within fifteen (15) days after an administrative order to begin final closure issued by the Director becomes final, or within fifteen (15) days after an order to begin final closure is issued by the D.C. Superior Court or other court of competent jurisdiction; or

(C) Provide alternate financial assurance as specified in this section, and obtain the Director's written approval of the assurance provided, within ninety (90) days after receipt by both the owner or operator and the Director of a notice of cancellation of the bond from the surety;

(4) Under the terms of the bond, the surety shall become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond;

(5) The penal sum of the bond shall be in an amount at least equal to the current closure cost estimate, except as provided in §4407.12(g);

(6) Whenever the current closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within sixty (60) days after the increase, shall either cause the penal sum to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the Director, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current closure cost estimate decreases, the penal sum may be reduced to the amount of the current closure cost estimate following written approval by the Director;

(7) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Director. Cancellation may not occur, however, during the one hundred twenty (120) days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Director, as evidence by the return receipts; and

(8) The owner or operator may cancel the bond if the Director has given prior written consent based on his or her receipt of evidence of alternate financial assurance as specified in this section;

(c) An owner or operator may satisfy the requirements of this section by obtaining a surety bond guaranteeing performance of closure which conforms to the requirements of this paragraph and submitting the bond to the Director. An owner or operator of a new facility shall submit the bond to the Director at least sixty (60) days before the date on which hazardous waste is first received for treatment, storage or disposal. The bond shall be effective before this initial receipt of hazardous waste. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury:

(1) The wording of the surety bond shall be identical to the wording specified in §4407.22(c);

(2) The owner or operator who uses a surety bond to satisfy the requirements of this section shall also establish a standby trust fund. Under the terms of the bond, all payments made thereunder shall be deposited by the surety directly into the standby trust fund in accordance with instructions from the Director. This standby trust shall meet the requirements specified in §4407.12(a), except that:

(A) An originally signed duplicate of the trust agreement shall be submitted to the Director with the surety bond; and

(B) Unless the standby trust fund is funded pursuant to the requirements of this section, the following are not required by this chapter:

(i) Payments into the trust fund as specified in §4407.12(a);

(ii) Updating of Schedule A of the trust agreement (see §4407.22(a)) to show current closure cost estimates;

(iii) Annual valuations as required by the trust agreement; and

(iv) Notices of nonpayment as required by the trust agreement.

(3) The bond shall guarantee that the owner or operator will do the following:

(A) Perform final closure in accordance with the closure plan and other requirements of the permit for the facility whenever required to do so; or

(B) Provide alternate financial assurance as specified in this section, and obtain the Director's written approval of the assurance provided, within ninety (90) days after receipt by both the owner or operator and the Director of a notice of cancellation of the bond from the surety;

(4) Under the terms of the bond, the surety shall become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond. Following a determination pursuant to §12(a) of HWMA (D.C. Code §6-711(a) (1981)) that the owner or operator has failed to perform final closure in accordance with the approved closure plan and other permit requirements when required to do so, under the terms of the bond the surety shall perform final closure as guaranteed

by the bond or shall deposit the amount of the penal sum into the standby trust fund;

(5) The penal sum of the bond shall be in an amount at least equal to the current closure cost estimate;

(6) Whenever the current closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within sixty (60) days after the increase, shall either cause the penal sum to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the Director, or obtain other financial assurance as specified in this section. Whenever the current closure cost estimate decreases, the penal sum may be reduced to the amount of the current closure cost estimate following written approval by the Director;

(7) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Director. Cancellation may not occur, however, during the one hundred twenty (120) days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Director, as evidenced by the return receipts;

(8) The owner or operator may cancel the bond if the Director has given prior written consent. The Director shall provide the written consent when the following occurs:

(A) An owner or operator substitutes alternate financial assurance as specified in this section; or

(B) The Director releases the owner or operator from the requirements of this section in accordance with §4407.12(i); and

(9) The surety shall not be liable for deficiencies in the performance of closure by the owner or operator after the Director releases the owner or operator from the requirements of this section in accordance with §4407.12(i);

(d) An owner or operator may satisfy the requirements of this section by obtaining an irrevocable standby letter of credit which conforms to the requirements of this paragraph and submitting the letter to the Director. An owner or operator of a new facility shall submit the letter of credit to the Director at least sixty (60) days before the date on which hazardous waste is first received for treatment, storage or disposal. The letter of credit shall be effective before this initial receipt of hazardous waste. The issuing institution shall be an entity which has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by a Federal or state agency:

(1) The wording of the letter of credit shall be identical to the wording specified in §4407.22(d);

(2) An owner or operator who uses a letter of credit to satisfy the requirements of this section shall also establish a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the Director shall be deposited by the issuing institution directly into the standby trust fund in accordance with instructions

from the Director. This standby trust fund shall meet the requirements of the trust fund specified in §4407.12(a), except that:

(A) An originally signed duplicate of the trust agreement shall be submitted to the Director with the letter of credit; and

(B) Unless the standby trust fund is funded pursuant to the requirements of this section, the following are not required by this chapter:

(i) Payments into the trust fund as specified in §4407.12(a);

(ii) Updating of Schedule A of the trust agreement (see §4407.22(a)) to show current closure cost estimates;

(iii) Annual valuations as required by the trust agreement; and

(iv) Notices of nonpayment as required by the trust agreement;

(3) The letter of credit shall be accompanied by a letter from the owner or operator referring to the letter of credit by number, issuing institution, and date, and providing the following information: the EPA Identification Number, name, and address of the facility, and the amount of funds assured for closure of the facility by the letter of credit;

(4) The letter of credit shall be irrevocable and issued for a period of at least one (1) year. The letter of credit shall provide that the expiration date shall be automatically extended for a period of at least one (1) year unless, at least one hundred twenty (120) days before the current expiration date, the issuing institution notifies both the owner or operator and the Director by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the one hundred twenty (120) days shall begin on the date when both the owner or operator and the Director have received the notice, as evidenced by the return receipts;

(5) The letter of credit shall be issued in an amount at least equal to the current closure cost estimate, except as provided in §4407.12(g);

(6) Whenever the current closure cost estimate increases to an amount greater than the amount of the credit, the owner or operator, within sixty (60) days after the increase, shall either cause the amount of the credit to be increased so that it at least equals the current closure cost estimate and submit evidence of such increase to the Director, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current closure cost estimate decreases, the amount of the credit may be reduced to the amount of the current closure cost estimate following written approval by the Director;

(7) Following a determination pursuant to §12(a) of HWMA (D.C. Code §6-711(a) (1981)) that the owner or operator has failed to perform final closure in accordance with the closure plan and other permit requirements when required to do so, the Director may draw on the letter of credit;

(8) If the owner or operator does not establish alternate financial assurance as specified in this section and obtain written approval of such alternate assurance from the Director within ninety (90) days after receipt by both the owner or operator and the Director of a notice from the issuing institution that it has decided not to extend the letter of credit beyond the current expiration date, the Director shall draw on the letter of credit. The Director may delay the drawing if the issuing institution grants an extension of the term of the credit. During the last thirty (30) days of any such extension the Director shall draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in this section and obtain written approval of such assurance from the Director;

(9) The Director shall return the letter of credit to the issuing institution for termination when:

(A) An owner or operator substitutes alternate financial assurance as specified in this section; or

(B) The Director releases the owner or operator from the requirements of this section in accordance with §4407.12(i);.

(e) An owner or operator may satisfy the requirements of this section by obtaining closure insurance which conforms to the requirements of this paragraph and submitting a certificate of insurance to the Director. An owner or operator of a new facility shall submit the certificate of insurance to the Director at least sixty (60) days before the date on which hazardous waste is first received for treatment, storage or disposal. The insurance shall be effective before this initial receipt of hazardous waste. At a minimum, the insurer shall be licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states:

(1) The wording of the certificate of insurance shall be identical to the wording specified in §4407.22(e);

(2) The closure insurance policy shall be issued for a face amount at least equal to the current closure cost estimate, except as provided in §4407.12(g). The term "face amount" means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer shall not change the face amount, although the insurer's future liability shall be lowered by the amount of the payments;

(3) The closure insurance policy shall guarantee that funds shall be available to close the facility whenever final closure occurs. The policy shall also guarantee that once final closure begins, the insurer shall be responsible for paying out funds, up to an amount equal to the face amount of the policy, upon the direction of the Director, to the party or parties as the Director specifies;

(4) After beginning partial or final closure, an owner or operator or any other person authorized to perform closure may request reimbursement for closure expenditures by submitting itemized bills to the Director. The owner or operator may request reimbursements for partial closure only if the remaining value of the policy is sufficient to cover the maximum costs of closing the facility over its remaining operating life. Within sixty (60) days after receiving bills for closure activities, the Director shall determine whether the closure expenditures are in accordance with the closure plan or otherwise

justified, and if so, he or she shall instruct the insurer to make reimbursement in such amounts as the Director specifies in writing. If the Director has reason to believe that the cost of closure over the remaining life of the facility will be significantly greater than the face amount of the policy, he or she may withhold reimbursement of such amounts as he or she deems prudent until he or she determines, in accordance with §4407.12(i), that the owner or operator is no longer required to maintain financial assurance for final closure of the facility. If the Director does not instruct the insurer to make such reimbursement, he or she will provide the owner or operator with a detailed statement of the reason;

(5) The owner or operator shall maintain the policy in full force and effect until the Director consents to termination of the policy by the owner or operator as specified in §4407.12(e)(9). Failure to pay the premium, without substitution of alternate financial assurance as specified in this section, shall constitute a significant violation of this chapter, warranting such remedy as the Director deems necessary. The violation shall be deemed to begin upon receipt by the Director of a notice of future cancellation, termination, or failure to renew due to nonpayment of the premium, rather than upon the date of expiration;

(6) Each policy shall contain a provision allowing assignment of the policy to a successor owner or operator. The assignment may be conditional upon consent of the insurer, provided such consent is not unreasonably refused;

(7) The policy shall provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy must, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the owner or operator and the Director. Cancellation, termination, or failure to renew may not occur, however, during the one hundred twenty (120) days beginning with the date of receipt of the notice by both the Director and the owner or operator, as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur and the policy shall remain in full force and effect if on or before the date of expiration:

(A) The Director deems the facility abandoned;

(B) The permit is terminated or revoked or a new permit is denied;

(C) Closure is ordered by the Director or D.C. Superior Court;

(D) The owner or operator is named as debtor in a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code; or

(E) The premium due is paid;

(8) Whenever the current closure cost estimate increases to an amount greater than the face amount of the policy, the owner or operator, within sixty (60) days after the increase, shall either cause the face amount to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the

Director, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current closure cost estimate decreases, the face amount may be reduced to the amount of the current closure cost estimate following written approval by the Director;

(9) The Director shall give written consent to the owner or operator that he or she may terminate the insurance policy when:

(A) An owner or operator substitutes alternate financial assurance as specified in this section; or

(B) The Director releases the owner or operator from the requirements of this section in accordance with §4407.12(i).

(f) An owner or operator may satisfy the requirements of this section by demonstrating that he or she passes a financial test as specified in this paragraph. To pass this test the owner or operator shall meet the criteria of either §4407.12(f)(1) or 4407.12(f)(2):

(1) The owner or operator shall have the following

(A) Two (2) of the following three (3) ratios:

(i) A ratio of total liabilities to net worth less than 2.0;

(ii) A ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and

(iii) A ratio of current assets to current liabilities greater than 1.5;

(B) Net working capital and tangible net worth each at least six (6) times the sum of the current closure and post-closure cost estimates;

(C) Tangible net worth of at least ten million dollars ($10,000,000); and

(D) Assets in the United States amounting to at least ninety percent (90%) of his or her total assets or at least six (6) times the sum of the current closure and post-closure cost estimates;

(2) The owner or operator shall have the following:

(A) A current rating for his or her most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's;

(B) Tangible net worth at least six (6) times the sum of the current closure cost and post-closure cost estimates;

(C) Tangible net worth of at least ten million dollars ($10,000,000); and

(D) Assets located in the United States amounting to at least ninety percent (90%) of his or her total assets or at least six (6) times the sum of the current closure and post-closure cost estimates;

(3) The phrase "current closure and post-closure cost estimates" as used in §4407.12(f) refers to the cost estimates required to be shown in §4407.22(f);

(4) To demonstrate that he or she meets this test, the owner or operator shall submit the following items to the Director:

(A) The letter signed by the owner's or operator's chief financial officer and worded as specified in §4407.22(f);

(B) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year; and

(C) A special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:

(i) He or she has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and

(ii) In connection with that procedure, no matters came to his or her attention which caused him or her to believe that the specified data should be adjusted;

(5) An owner or operator of a new facility shall submit the items specified in §4407.12(f)(4) to the Director at least sixty (60) days before the date on which hazardous waste is first received for treatment or storage;

(6) After the initial submission of items specified in §4407.12(f)(4), the owner or operator shall send updated information to the Director within ninety (90) days after the close of each succeeding fiscal year. This information shall consist of all three (3) items specified in §4407.12(f)(4);

(7) If the owner or operator no longer meets the requirements of §4407.12(f), he or she shall send notice to the Director of intent to establish alternate financial assurance as specified in this section. The notice shall be sent by certified mail within ninety (90) days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the requirements. The owner or operator shall provide the alternate financial assurance within one hundred twenty (120) days after the end of the fiscal year;

(8) The Director may, based on a reasonable belief that the owner or operator may no longer meet the requirements of §4407.12(f), require reports of financial condition at any time from the owner or operator in addition to those specified in §4407.12(f)(4). If the Director finds, on the basis of the reports or other information, that the owner or operator no longer meets the requirements of §4407.12(f), the owner or operator shall provide alternate financial assurance as specified in this section within thirty (30) days after notification of the finding;

(9) The Director may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his or her report on examination of the owner's or operator's financial statements (see §4407.12(f)(4)(B)). An adverse opinion or a disclaimer of opinion shall be cause for disallowance. The Director shall evaluate other qualifications on an individual basis. The owner or operator shall provide alternate financial assurance as specified in this section within thirty (30) days after notification of the disallowance;

(10) The owner or operator is no longer required to submit the items specified in §4407.12(f)(4) when:

(A) An owner or operator substitutes alternate financial assurance as specified in this section; or

(B) The Director releases the owner or operator from the requirements of this section in accordance with §4407.12(i)

(11) An owner or operator may meet the requirements of this section by obtaining a written guarantee, hereafter referred to as "corporate guarantee." The guarantor shall be the parent corporation of the owner or operator. The guarantor shall meet the requirements for owners or operators in §§4407.12(f) through 4407.12(f)(9) and shall comply with the terms of the corporate guarantee. The wording of the corporate guarantee shall be identical to the wording specified in §4407.23. The corporate guarantee shall accompany the items sent to the Director as specified in §4407.12(f)(4). The terms of the corporate guarantee shall provide that:

(A) If the owner or operator fails to perform final closure of a facility covered by the corporate guarantee in accordance with the closure plan and other permit requirements whenever required to do so, the guarantor shall do so or establish a trust fund as specified in §4407.12(a) in the name of the owner or operator;

(B) The corporate guarantee shall remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator and to the Director. Cancellation may not occur, however, during the one hundred twenty (120) days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Director, as evidenced by the return receipts; and

(C) If the owner or operator fails to provide alternate financial assurance as specified in this section and obtain the written approval of such alternate assurance from the Director within ninety (90) days after receipt by both the owner or operator and the Director of a notice of cancellation of the corporate guarantee from the guarantor, the guarantor shall provide such alternative financial assurance in the name of the owner or operator;

(g) An owner or operator may satisfy the requirements of this section by establishing more than one financial mechanism per facility. These mechanisms are limited to trust funds, surety bonds guaranteeing payment into a trust fund, letters of credit, and insurance. The mechanisms shall be as specified in §§4407.12(a), (b), (d), and (e), respectively, except that it is the

combination of mechanisms, rather than the single mechanism, which shall provide financial assurance for an amount at least equal to the current closure cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or a letter of credit, he or she may use the trust fund as the standby trust fund for the other mechanisms. A single standby trust fund may be established for two (2) or more mechanisms. The Director may use any or all of the mechanisms to provide for closure of the facility;

(h) An owner or operator may use a financial assurance mechanism specified in this section to meet the requirements of this section for more than one (1) facility. Evidence of financial assurance submitted to the Director shall include a list showing, for each facility, the EPA Identification Number, name, address, and the amount of funds for closure assured by the mechanism. The amount of funds available through the mechanism shall be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility. In directing funds available through the mechanism for closure of any of the facilities covered by the mechanism, the Director may direct only the amount of funds designated for that facility, unless the owner or operator agrees to the use of additional funds available under the mechanism; and

(i) Within sixty (60) days after receiving certifications from the owner or operator and an independent registered professional engineer that final closure has been accomplished in accordance with the approved closure plan, the Director shall notify the owner or operator in writing that he or she is no longer required by this section to maintain financial assurance for final closure of the particular facility, unless the Director has reason to believe that final closure has not been in accordance with the approved closure plan. The Director will provide the owner or operator a detailed written statement of the reason he or she believes the closure was not done in accordance with the approved closure plan.

4407.13 The owner or operator shall have a detailed written estimate, in current dollars, of the annual cost of post-closure monitoring and maintenance of the facility in accordance with the applicable post-closure regulations in §§4406.17 through 4406.31, 4410.17 through 4410.20, and 4420.1 through 4420.4:

(a) The post-closure cost estimate shall be based on the cost to the owner or operator of hiring a third party to conduct post-closure care activities. A third party shall be a party who is neither a parent nor a subsidiary of the owner or operator. (See definition of parent corporation in Chapter 54); and

(b) The post-closure cost estimate shall be calculated by multiplying the annual post-closure cost estimate by the number of years of post-closure care required under §§4406.17 through 4406.21.

4407.14 During the active life of the facility, the owner or operator shall adjust the post-closure cost estimate for inflation within sixty (60) days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with §§4407.17 through 4407.18. For owners or operators using the financial test or corporate guarantee, the post-closure cost estimate shall be up-dated for inflation within thirty (30) days after the close of the firm's fiscal year and before the submission of updated information to the Director as specified in §4407.17(f)(6). The adjustment may be made by recalculating the post-closure cost estimate in current dollars or by using an inflation factor derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its Survey of Current Business as specified in

§§4407.17(b) and (b)(1). The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year:

(a) The first adjustment shall be made by multiplying the post-closure cost estimate by the latest inflation factor. The result is the adjusted post-closure cost estimate; and

(b) Subsequent adjustments shall be made by multiplying the latest adjusted post-closure cost estimate by the latest inflation factor.

4407.15 During the active life of the facility, the owner or operator shall revise the post-closure cost estimate within thirty (30) days after the Director has approved the request to modify the post-closure plan, if the change in the post-closure plan increases the cost of post-closure care. The revised post-closure cost estimate shall be adjusted for inflation as specified in §4407.14.

4407.16 The owner or operator shall keep the following at the facility during the operating life of the facility:

(a) The latest post-closure cost estimate prepared in accordance with §§4407.13 and 4407.15; and

(b) When this estimate has been adjusted in accordance with §4407.14, the latest adjusted post-closure cost estimate.

4407.17 The owner or operator of a hazardous waste management unit subject to the requirements of §§4407.13 through 4407.16 shall establish financial assurance for post-closure care in accordance with the approved post-closure plan for the facility sixty (60) days prior to the initial receipt of hazardous waste or the effective date of the regulations, whichever is later. He or she shall choose from the following options:

(a) An owner or operator may satisfy the requirements of this section by establishing a post-closure trust fund which conforms to the requirements of this paragraph and submitting an originally signed duplicate of the trust agreement to the Director. An owner or operator of a new facility shall submit the originally signed duplicate of the trust agreement to the Director at least sixty (60) days before the date on which hazardous waste is first received for disposal. The trustee shall be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency:

(1) The wording of the trust agreement shall be identical to the wording specified in §4407.22(a)(1), and the trust agreement shall be accompanied by a formal certification of acknowledgement (for example, see §4407.22(a)(2)). Schedule A of the trust agreement shall be updated within sixty (60) days after a change in the amount of the current post-closure cost estimate covered by the agreement;

(2) Payments into the trust fund shall be made annually by the owner or operator over the term of the initial HWMA permit or over the remaining operating life of the facility as estimated in the closure plan, whichever period is shorter; this period is hereafter referred to as the "pay-in-period." The payments into the post-closure trust fund shall be made as follows:

(A) For a new facility, the first payment shall be made before the initial receipt of hazardous waste for disposal. A receipt from

the trustee for this payment shall be submitted by the owner or operator to the Director before this initial receipt of hazardous waste. The first payment shall be at least equal to the current post-closure cost estimate, except as provided in §4407.17(g), divided by the number of years in the pay-in period. Subsequent payments shall be made no later than thirty (30) days after each anniversary date of the first payment. The amount of each subsequent payment shall be determined by this formula:

$$\text{Next payment} = \frac{\text{CE-CV}}{\text{Y}}$$

where CE is the current post-closure cost estimate, CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period;

(B) If an owner or operator establishes a trust fund as specified in §4407.17(a), and the value of that trust fund is less than the current post-closure cost estimate when a permit is awarded for the facility, the amount of the current post-closure cost estimate still to be paid into the fund shall be paid in over the pay-in period as defined in paragraph (a)(2) of this section. Payments shall continue to be made no later than thirty (30) days after each anniversary date of the first payment made pursuant to the requirements of this section. The amount of each payment shall be determined by this formula:

$$\text{Next payment} = \frac{\text{CE-CV}}{\text{Y}}$$

where CE is the current post-closure cost estimate, CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period;

(3) The owner or operator may accelerate payments into the trust fund or he or she may deposit the full amount of the current post-closure cost estimate at the time the fund is established. However, he or she shall maintain the value of the fund at no less than the value that the fund would have if annual payments were made as specified in paragraph (a)(2) of this section;

(4) If the owner or operator establishes a post-closure trust fund after having used one or more alternate mechanisms specified in this section, his or her first payment shall be in at least the amount that the fund would contain if the trust fund were established initially and annual payments made according to specifications of this paragraph as applicable;

(5) After the pay-in-period is completed, whenever the current post-closure cost estimate changes during the operating life of the facility, the owner or operator shall compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the owner or operator, within sixty (60) days after the change in the cost estimate, shall either deposit an amount into the fund so that its value after this deposit at least equals the amount of the current post-closure cost estimate, or obtain other financial assurance as specified in this section to cover the difference;

(6) During the operating life of the facility, if the value of the trust fund is greater than the total amount of the current post-closure cost estimate, the owner or operator may submit a written request to the Director for release of the amount in excess of the current post-closure cost estimate;

(7) If an owner or operator substitutes other financial assurance as specified in this section for all or part of the trust fund, he or she may submit a written request to the Director for release of the amount in excess of the current post-closure cost estimate covered by the trust fund.

(8) Within sixty (60) days after receiving a request from the owner or operator for release of funds as specified in §4407.17(a)(6) or 4407.17(a) (7) of this section, the Director will instruct the trustee to release to the owner or operator the funds as the Director specifies in writing;

(9) During the period of post-closure care, the Director may approve a release of funds if the owner or operator demonstrates to the Director that the value of the trust fund exceeds the remaining cost of post-closure care;

(10) An owner or operator or any other person authorized to conduct post-closure care may request reimbursements for post-closure care expenditures by submitting itemized bills to the Director. Within sixty (60) days after receiving bills for post-closure care activities, the Director will instruct the trustee to make reimbursements in those amounts as the Director specifies in writing, if the Director determines that the post-closure care expenditures are in accordance with the approved post-closure plan or otherwise justified. If the Director does not instruct the trustee to make such reimbursements, he or she will provide the owner or operator with a detailed written statement of reasons;

(11) The Director shall agree to termination of the trust when:

(A) An owner or operator substitutes alternate financial assurance as specified in this section; or

(B) The Director releases the owner operator from the requirements of this section in accordance with §4407.17(i);

(b) An owner or operator may satisfy the requirements of this section by obtaining a surety bond which conforms to the requirements of this paragraph and submitting the bond to the Director. An owner or operator of a new facility shall submit the bond to the Director at least sixty (60) days before the date on which hazardous waste is first received for disposal. The bond shall be effective before this initial receipt of hazardous waste. The surety company issuing the bond shall, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury:

(1) The wording of the surety bond shall be identical to the wording specified in §4407.22(b);

(2) The owner or operator who uses a surety bond to satisfy the requirements of this section shall also establish a standby trust fund.

Under the terms of the bond, all payments made thereunder shall be deposited by the surety directly into the standby trust fund in accordance with instructions from the Director. The standby trust fund shall meet the requirements specified in §4407.17(a), except that:

(A) An originally signed duplicate of the trust agreement shall be submitted to the Director with the surety bond; and

(B) Until the standby trust fund is funded pursuant to the requirements of this section, the following shall not be required by this chapter:

(i) Payments into the trust fund as specified in §4407.17(a);

(ii) Updating of Schedule A of the Trust agreement (see §4407.22(a)) to show current post-closure cost estimates;

(iii) Annual valuations as required by the trust agreement; and

(iv) Notices of nonpayment as required by the trust agreement;

(3) The bond shall guarantee that the owner or operator will do the following:

(A) Fund the standby trust fund in an amount equal to the penal sum of the bond before the beginning of final closure of the facility;

(B) Fund the standby trust fund in an amount equal to the penal sum within fifteen (15) days after an administrative order to begin final closure issued by the Director becomes final, or within fifteen (15) days after an order to begin final closure is issued by the District of Columbia Superior Court or other court of competent jurisdiction; or

(C) Provide alternate financial assurance as specified in this section, and obtain the Director's written approval of the assurance provided, within ninety (90) days after receipt by both the owner or operator and the Director of a notice of cancellation of the bond from the surety;

(4) Under the terms of the bond, the surety shall become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond;

(5) The penal sum of the bond shall be in an amount at lease equal to the current post-closure cost estimate, except as provided in §4407.17(g);

(6) Whenever the current post-closure cost estimate increases to an amount greater than the penal sum, the owner or operator within sixty (60) days after the increase, shall either cause the penal sum to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of the increase to the Director, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current post-closure cost estimate decreases, the penal sum may be reduced to the amount of the

current post-closure cost estimate following written approval by the Director;

(7) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Director. Cancellation may nor occur, however, during the one hundred twenty (120) days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Director, as evidenced by the return receipts; and

(8) The owner or operator may cancel the bond if the Director has given prior written consent based on his or her receipt of evidence of alternate financial assurance as specified in this section;

(c) An owner or operator may satisfy the requirements of this section by obtaining a surety bond which conforms to the requirements of this paragraph and submitting the bond to the Director. An owner or operator of a new facility shall submit the bond to the Director at least sixty (60) days before the date on which hazardous waste is first received for disposal. The bond shall be effective before this initial receipt of hazardous waste. The surety company issuing the bond shall, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury:

(1) The wording of the surety bond shall be identical to the wording specified in §4407.22(c);

(2) The owner or operator who uses a surety bond to satisfy the requirements of this section shall also establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the Director. This standby trust fund shall meet the requirements specified in §4407.17(a), except that:

(A) An originally signed duplicate of the trust agreement shall be submitted to the Director with the surety bond; and

(B) Unless the standby trust fund is funded pursuant to the requirements of this section, the following shall not be required by this chapter:

(i) Payments into the trust fund as specified in §4407.17(a);

(ii) Updating of Schedule A of the trust agreement (see §4407.22(a)) to show current post-closure cost estimates;

(iii) Annual valuations as required by the trust agreement; and

(iv) Notices of nonpayment as required by the trust agreement;

(3) The bond shall guarantee that the owner or operator will do the following:

(A) Perform post-closure care in accordance with the post-closure plan and other requirements of the permit for the facility; or

(B) Provide alternate financial assurance as specified in this section, and obtain the Director's written approval of the assurance provided, within ninety (90) days of receipt by both the owner or operator and the Director of a notice of cancellation of the bond from the surety;

(4) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond. Following a final administrative determination pursuant to HWMA that the owner or operator has failed to perform post-closure care in accordance with the approved post-closure plan and other permit requirements, under the terms of the bond the surety will perform post-closure care in accordance with the post-closure plan or other permit conditions or will deposit the amount of the penal sum into the standby trust fund;

(5) The penal sum of the bond shall be in an amount at least equal to the current post-closure cost estimate, except as provided in §4407.17(g);

(6) Whenever the current post-closure cost estimate increases to an amount greater than the penal sum during the operating life of the facility, the owner or operator, within sixty (60) days after the increase, shall either cause the penal sum to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of such increase to the Director, or obtain other financial assurance as specified in this section. Whenever the current post-closure cost estimate decreases during the operating life of the facility, the penal sum may be reduced to the amount of the current post-closure cost estimate following written approval by the Director;

(7) During the period of post-closure care, the Director may approve a decrease in the penal sum if the owner or operator demonstrates to the Director that the amount exceeds the remaining cost of post-closure care;

(8) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Director. Cancellation may not occur, however, during the one hundred twenty (120) days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Director, as evidenced by the return receipts;

(9) The owner or operator may cancel the bond if the Director has given prior written consent. The Director will provide a written consent when:

(A) An owner or operator substitutes alternate financial assurance as specified in this section; or

(B) The Director releases the owner or operator from the requirements of this section in accordance with §4407.17(i);

(10) The surety shall not be liable for deficiencies in the performance of post-closure care by the owner or operator after the Director releases the owner or operator from the requirements of this section in accordance with §4407.17(i);

(d) An owner or operator may satisfy the requirements of this section by obtaining an irrevocable stand-by letter of credit which conforms to the requirements of this paragraph and submitting the letter to the Director. An owner or operator of a new facility shall submit the letter of credit to the Director at least sixty (60) days before the date on which hazardous waste is first received for disposal. The letter of credit shall be effective before this initial receipt of hazardous waste. The issuing institution shall be an entity which has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by a Federal or State agency:

(1) The wording of the letter of credit shall be identical to the wording specified in §4407.22(d);

(2) An owner or operator who uses a letter of credit to satisfy the requirements of this section shall also establish a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the Director shall be deposited by the issuing institution into the standby trust fund in accordance with instructions from the Director. This standby trust fund shall meet the requirements of the trust fund specified in §4407.17(a), except that:

(A) An originally signed duplicate of the trust agreement shall be submitted to the Director with the letter of credit;

(B) Unless the standby trust fund is funded pursuant to the requirements of this section, the following are not required by this chapter:

(i) Payments into the trust fund as specified in §4407.17(a);

(ii) Updating of Schedule A of the trust agreement (see §4407.22(a)) to show current post-closure cost estimates;

(iii) Annual valuations as required by the trust agreement; and

(iv) Notices of nonpayment as required by the trust agreement;

(3) The letter of credit shall be accompanied by a letter from the owner or operator referring to the letter of credit by number, issuing institution, and date, and providing the following information:

(A) The EPA Identification Number, name, and address of the facility; and

(B) The amount of funds assured for post-closure care of the facility by the letter of credit;

(4) The letter of credit shall be irrevocable and issued for a period of at least one (1) year. The letter of credit shall provide that the expiration date will be automatically extended for a period of at least one (1) year unless, at least one hundred twenty (120) days before the current expiration date, the issuing institution notifies both the owner or operator and the Director by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the one hundred twenty (120) days will begin on the date when both

the owner or operator and the Director have received the notice, as evidenced by the return receipts;

(5) The letter of credit shall be issued in an amount at least equal to the current post-closure cost estimate, except as provided in §4407.17(g);

(6) Whenever the current post-closure cost estimate increases to an amount greater than the amount of the credit during the operating life of the facility, the owner or operator, shall either cause the amount of the credit to be increased, so that, it at least equals the current post-closure cost estimate and submit evidence of such increase to the Director, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current post-closure cost estimate decreases during the operating life of the facility, the amount of the credit may be reduced to the amount of the current post-closure cost estimate following written approval by the Director;

(7) During the period of post-closure care, the Director may approve a decrease in the amount of the letter of credit if the owner or operator demonstrates to the Director that the amount exceeds the remaining cost of post-closure care;

(8) Following a final administrative determination pursuant to the HWMA §12(a) that the owner or operator has failed to perform post-closure care in accordance with the approved post-closure plan and other permit requirements, the Director may draw on the letter of credit;

(9) If the owner or operator does not establish alternate financial assurance as specified in this section and obtain written approval of such alternate assurance from the Director within ninety (90) days after receipt by both the owner or operator and the Director of a notice from the issuing institution that it has decided not to extend the letter of credit beyond the current expiration date, the Director shall draw on the letter of credit. The Director may delay the drawing if the issuing institution grants an extension of the term of the credit. During the last thirty (30) days of any extension the Director will draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in this section and obtain written approval of the assurance from the Director;

(10) The Director shall return the letter of credit to the issuing institution for termination when:

(A) An owner or operator substitutes alternate financial assurance as specified in this section; or

(B) The Director releases the owner or operator from the requirements of this section in accordance with §4407.17(i);

(e) An owner or operator may satisfy the requirements of this section by obtaining post-closure insurance which conforms to the requirements of this paragraph and submitting a certificate of insurance to the Director. An owner or operator of a new facility shall submit the certificate of insurance to the Director at least sixty (60) days before the date on which hazardous waste is first received for disposal. The insurance shall be effective before this initial receipt of hazardous waste. At a minimum, the insurer shall be

licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one (1) or more states:

(1) The wording of the certificate of insurance shall be identical to the wording specified in §4407.23(e);

(2) The post-closure insurance policy shall be issued for a face amount at least equal to the current post-closure cost estimate, except as provided in §4407.17(g). The term "face amount" means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face amount, although the insurer's future liability will be lowered by the amount of the payments;

(3) The post-closure insurance policy shall guarantee that funds will be available to provide post-closure care of the facility whenever the post-closure period begins. The policy shall also guarantee that once post-closure care begins, the insurer will be responsible for paying out funds, up to an amount equal to the face amount of the policy, upon the direction of the Director, to the party or parties as the Director specifies;

(4) An owner or operator or any other person authorized to conduct post-closure care may request reimbursements for post-closure care expenditures by submitting itemizing bills to the Director. Within sixty (60) days after receiving bills for post-closure care activities, the Director will instruct the insurer to make reimbursements in those amounts as the Director specifies in writing, if the Director determines that the post-closure care expenditures are in accordance with the approved post-closure plan or otherwise justified. If the Director does not instruct the insurer to make the reimbursements, he or she will provide the owner or operator with a detailed written statement of reasons;

(5) The owner or operator shall maintain the policy in full force and effect until the Director consents to termination of the policy by the owner or operator as specified in paragraph (10) of this section. Failure to pay the premium, without substitution of alternate financial assurance as specified in this section, will constitute a significant violation of this chapter, warranting the remedy as the Director deems necessary. The violation will be deemed to begin upon receipt by the Director of a notice of future cancellation, termination, or failure to renew due to nonpayment of the premium, rather than upon the date of expiration;

(6) Each policy shall contain a provision allowing assignment of the policy to a successor owner or operator. The assignment may be conditional upon consent of the insurer; Provided, that consent is not unreasonably refused;

(7) Each policy shall provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy shall at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the owner or operator and the Director. Cancellation, termination, or failure to renew may not occur, however, during the

one hundred twenty (120) days beginning with the date of receipt of the notice by both the Director and the owner or operator, as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur and the policy will remain in full force and effect in the event that on or before the date of expiration:

(A) The Director deems the facility abandoned;

(B) The permit is terminated or revoked or a new permit is denied;

(C) Closure is ordered by the Director or a U.S. District Court or other court of competent jurisdiction;

(D) The owner or operator is named as debtor in a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code; or

(E) The premium due is paid;

(8) Whenever the current post-closure cost estimate increases to an amount greater than the face amount of the policy during the operating life of the facility, the owner or operator within sixty (60) days after the increase, shall either cause the face amount to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of the increase to the Director or obtain other financial assurance as specified in this section to cover the increase. Whenever the current post-closure cost estimate decreases during the operating life of the facility, the face amount may be reduced to the amount of the current post-closure cost estimate following written approval by the Director;

(9) Commencing on the date that liability to make payments pursuant to the policy accrues, the insurer will thereafter annually increase the face amount of the policy. The increase shall be equivalent to the face amount of the policy, less any payments made, multiplied by an amount equivalent to eighty-five percent (85%) of the most recent investment rate or of the equivalent coupon-issue yield announced by the U.S. Treasury for twenty-six-week (26) Treasury securities;

(10) The Director will give written consent to the owner or operator that he or she may terminate the insurance policy when:

(A) An owner or operator substitutes alternate financial assurance as specified in this section; or

(B) The Director releases the owner or operator from the requirements of this section in accordance with §4407.17(i).

(f) An owner or operator may satisfy the requirements of this section by demonstrating that he or she passes a financial test as specified in this paragraph. To pass this test the owner or operator shall meet the criteria of either paragraphs (f)(1) or (f)(2) of this section:

(1) The owner or operator shall have:

(A) Two (2) of the following three (3) ratios:

(i) A ratio of total liabilities to net worth less than 2.0;

(ii) A ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and

(iii) A ratio of current assets to current liabilities greater than 1.5;

(B) Net working capital and tangible net worth each at least six (6) times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates;

(C) Tangible net worth of at least ten million dollars ($10,000,000); and

(D) Assets in the United States amounting to at least ninety percent (90%) of his or her total assets or at least six (6) times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates;

(2) The owner or operator shall have the following:

(A) A current rating for his or her most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A or Baa as issued by Moody's;

(B) Tangible net worth at least six (6) times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates;

(C) Tangible net worth of at least ten million dollars ($10,000,000); and

(D) Assets located in the United States amounting to at least ninety percent (90%) of his or her total assets or at least six (6) times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates;

(3) The phrase "current closure and post-closure cost estimates" as used in paragraphs (f)(1) and (f)(2) of this section refers to the cost estimates required to be shown in paragraphs 1-4 of the letter from the owners or operator's chief financial officer (see §4407.22(f)). The phrase "current plugging and abandonment cost estimates" as used in paragraphs (f)(1) and (f)(2) of this section refers to the cost estimates required to be shown in paragraphs 1-4 of the letter from the owner's or operator's chief financial officer;

(4) To demonstrate that he or she meets this test, the owner or operator shall submit the following items to the Director:

(A) A letter signed by the owner's or operator's chief financial officer and worded as specified in §4407.22(f);

(B) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year; and

(C) A special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:

(i) He or she has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in the financial statements; and

(ii) In connection with that procedure, no matters came to his or her attention which caused him or her to believe that the specified data should be adjusted;

(5) An owner or operator of a new facility shall submit the items specified in paragraph (f)(4), of this section to the Director at least sixty (60) days before the date on which hazardous waste is first received for disposal;

(6) After the initial submission of items specified in paragraph (f)(4) of this section, the owner or operator shall send updated information to the Director within ninety (90) days after the close of each succeeding fiscal year. This information shall consist of all three (3) items specified in paragraph (f)(4) of this section;

(7) If the owner or operator no longer meets the requirements of paragraphs (f)(1) and (f)(2) of this section, he or she shall send notice to the Director of intent to establish alternate financial assurance as specified in this section. The notice shall be sent by certified mail within ninety (90) days after the end of the fiscal year for which the year-end financial date show that the owner or operator no longer meets the requirements. The owner or operator shall provide the alternate financial assurance within one hundred twenty (120) days after the end of the fiscal year;

(8) The Director may, based on a reasonable belief that the owner or operator may no longer meet the requirements of paragraphs (f)(1) and (f)(2) of this section, require reports of financial condition at any time from the owner or operator in addition to those specified in paragraph (f)(4) of this section. If the Director finds, on the basis of the reports or other information, that the owner or operator no longer meets the requirements of paragraphs (f)(1) and (f)(2) of this section, the owner or operator shall provide alternate financial assurance as specified in this section within thirty (30) days after notification of such a finding;

(9) The Director may disallow use of the test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his or her report on examination of the owner's or operator's financial statements (see paragraph (f)(4)(B) and (C) of this section). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The Director will evaluate other qualifications on an individual basis. The owner or operator shall provide alternate financial assurance as specified in this section within thirty (30) days after notification of the disallowance;

(10) During the period of post-closure care, the Director may approve a decrease in the current post-closure cost estimate for which this test

demonstrates financial assurance if the owner or operator demonstrates to the Director that the amount of the cost estimate exceeds the remaining cost of post-closure care;

(11) The owner or operator shall no longer be required to submit the items specified in paragraph (f)(4) of this section when:

(A) An owner or operator substitutes alternate financial assurance as specified in this section; or

(B) The Director releases the owner or operator from the requirements of this section in accordance with §4407.17(i);

(12) An owner or operator may meet the requirements of this section by obtaining a written guarantee (hereafter referred to as "corporate guarantee"). The guarantor shall be the parent corporation of the owner or operator. The guarantor shall meet the requirements for owners or operators in paragraphs (f)(1) through (10) of this section and shall comply with the terms of the corporate guarantee. The wording of the corporate guarantee shall be identical to the wording specified in §§4407.23 through 4407.24. The corporate guarantee shall accompany the items sent to the Director as specified in paragraph (f)(4) of this section. The terms of the corporate guarantee shall provide that:

(A) If the owner or operator fails to perform post-closure care of a facility covered by the corporate guarantee in accordance with the post-closure plan and other permit requirements whenever required to do so, the guarantor will do so or establish a trust fund as specified in §4407.17(a) in the name of the owner or operator;

(B) The corporate guarantee shall remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator and to the Director. Cancellation may not occur, however, during the one hundred twenty (120) days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Director, as evidenced by the return receipts; and

(C) If the owner or operator fails to provide alternate financial assurance as specified in this section and obtain the written approval of such alternate assurance from the Director within ninety (90) days after receipt by both the owner or operator and the Director of a notice of cancellation of the corporate guarantee from the guarantor, the guarantor shall provide the alternate financial assurance in the name of the owner or operator;

(g) An owner or operator may satisfy the requirements of this section by establishing more than one (1) financial mechanism per facility. These mechanisms shall be limited to trust funds, surety bonds guaranteeing payment into a trust fund, letters of credit, and insurance. The mechanisms shall be as specified in paragraphs (a), (b), (d), and (e), respectively, of this section, except that, it is the combination of mechanisms, rather than the single mechanisms which must provide financial assurance for an amount at least equal to the current post-closure cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or a letter of credit, he

or she may use the trust fund as the standby trust fund for the other mechanisms. A single standby trust fund may be established for two (2) or more mechanisms. The Director may use any or all of the mechanisms to provide for post-closure care of the facility;

(h) An owner or operator may use a financial assurance mechanism specified in this section to meet the requirements of this section for more than one (1) facility. Evidence of financial assurance submitted to the Director shall include a list showing, for each facility, the EPA Identification number, name, address, and the amount of funds for post-closure care assured by the mechanism. The amount of funds available through the mechanism shall be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility. In directing funds available through the mechanism for post-closure care of any of the facilities covered by the mechanism, the Director may direct only the amount of funds designated for that facility, unless the owner or operator agrees to the use of additional funds available under the mechanism; and

(i) Within sixty (60) days after receiving certifications from the owner or operator and an independent registered professional engineer that the post-closure care period has been completed for a hazardous waste disposal unit in accordance with the approved plan, the Director will notify the owner or operator that he or she is no longer required to maintain financial assurance for post-closure care of that unit, unless the Director has reason to believe that post-closure care has not been in accordance with the approved post-closure plan. The Director shall provide the owner or operator with a detailed written statement of any such reason to believe that post-closure care has not been in accordance with the approved post-closure plan.

4407.18 An owner or operator may satisfy the requirements for financial assurance for both closure and post-closure care for one (1) or more facilities by using a trust fund, surety bond, letter of credit, insurance, financial test, or corporate guarantee that meets the specifications for the mechanism in both §§4407.12 and 4407.17. The amount of funds available through the mechanism shall be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for financial assurance of closure and post-closure care.

4407.19 Liability requirements shall be met by one of the following mechanisms:

(a) An owner or operator of a hazardous waste treatment, storage or disposal facility, or a group of facilities, shall demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator shall have and maintain liability coverage for sudden accidental occurrences in the amount of at least one million dollars ($1,000,000) per occurrence with an annual aggregate of at least two million dollars ($2,000,000), exclusive of legal defense costs. This liability coverage may be demonstrated in one (1) of three (3) ways, as specified in §§4407.19(a)(1), (a)(2), and (a)(3):

(1) An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in this paragraph:

(A) Each insurance policy shall be amended by attachment of the Hazardous Waste Facility Liability Endorsement or evidenced by a Certificate of Liability Insurance. The wording of the

endorsement shall be identical to the wording specified in §4407.25. The wording of the certificate of insurance shall be identical to the wording specified in §4407.28. The owner or operator shall submit a signed duplicate original of the endorsement or the certificate of insurance to the Director. If requested by the Director, the owner or operator shall provide a signed duplicate original of the insurance policy. An owner or operator of a new facility shall submit the signed duplicate original of the Hazardous Waste Facility Liability Endorsement or the Certificate of Liability Insurance to the Director at least sixty (60) days before the date on which hazardous waste is first received for treatment, storage or disposal. The insurance shall be effective before this initial receipt of hazardous waste; and

(B) Each insurance policy shall be issued by an insurer which, at a minimum, is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in the District;

(2) An owner or operator may meet the requirements of this section by passing a financial test or using the corporate guarantee for liability coverage as specified in §4407.19(g); or

(3) An owner or operator may demonstrate the required liability coverage through use of the financial test, insurance, the corporate guarantee, a combination of the financial test and insurance, or a combination of the corporate guarantee and insurance. The amounts of coverage demonstrated shall total at least the minimum amounts required by this paragraph;

(b) An owner or operator of a miscellaneous disposal unit which is used to manage hazardous waste, or a group of such facilities, shall demonstrate financial responsibility for bodily injury and property damage to third parties caused by nonsudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator shall have and maintain liability coverage for nonsudden accidental occurrences in the amount of at least three million dollars ($3,000,000) per occurrence with an annual aggregate of at least six million dollars ($6,000,000), exclusive of legal defense costs. This liability coverage may be demonstrated in one (1) of three (3) ways, as specified in §§4407.19(b)(1), (b)(2), and (b)(3):

(1) An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in this paragraph:

(A) Each insurance policy shall be amended by attachment of the Hazardous Waste Facility Liability Endorsement or evidenced by a Certificate of Liability Insurance. The wording of the endorsement shall be identical to the wording specified in §§4407.25 through 4407.27. The wording of the certificate of insurance shall be identical to the wording specified in §§4407.28 through 4407.30. The owner or operator shall submit a signed duplicate original of the endorsement or the certificate of insurance to the Director. If requested by the Director, the owner or operator shall provide a signed duplicate original of the insurance policy. An owner or operator of a new facility shall submit the signed duplicate original of the Hazardous Waste Facility Liability Endorsement or the Certificate of Liability Insurance to the Director at least sixty (60) days before the date

on which hazardous waste is first received for treatment, storage or disposal. The insurance shall be effective before this initial receipt of hazardous waste; and

(B) Each insurance policy shall be issued by an insurer which, at a minimum, is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in the District;

(2) An owner or operator may meet the requirements of this section by passing a financial test for liability coverage or using the corporate guarantee for liability coverage as specified in §§4407.19(f) and (g);

(3) An owner or operator may demonstrate the required liability coverage through use of the financial test, insurance, the corporate guarantee, a combination of the financial tests and insurance, or a combination of the corporate guarantee and insurance. The amounts of coverage demonstrated shall total at least the minimum amounts required by this paragraph;

(4) For existing facilities, the required liability coverage for nonsudden accidental occurrences shall be demonstrated by the dates listed in this paragraph. The total sales or revenues of the owner or operator in all lines of business, in the fiscal year preceding the effective date of this chapter, shall determine which of the dates apply. If the owner and operator of a facility are two (2) different parties, or if there is more than one owner or operator, the sales or revenues of the owner or operator with the largest sales or revenues shall determine the date by which the coverage shall be demonstrated. The dates are as follows:

(A) For an owner or operator with sales or revenues totalling ten million dollars ($10,000,000) or more, six (6) months after the effective date of this chapter;

(B) For an owner or operator with sales or revenues greater than five million dollars ($5,000,000), but less than ten million dollars ($10,000,000), eighteen (18) months after the effective date of this chapter; and

(C) All other owners or operators, thirty (30) months after the effective date of this chapter;

(c) If an owner or operator can demonstrate to the satisfaction of the Director that the levels of financial responsibility required by §4407.19(a) or §4407.19(b) are not consistent with the degree and duration of risk associated with treatment, storage or disposal at the facility or group of facilities, the owner or operator may obtain a variance from the Director. The request for a variance shall be submitted to the Director as part of the application under Chapter 46 for a facility that does not have a permit, or pursuant to the procedures for permit modification under Chapter 47 for a facility that has a permit. If granted, the variance shall take the form of an adjusted level of required liability coverage, such level to be based on the Director's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. The Director may require an owner or operator who requests a variance to provide technical and engineering information as is deemed necessary by the Director to determine a level of financial responsibility other than that required by §4407.19(a) or

4407.19(b). Any request for a variance for a permitted facility shall be treated as a request for a permit modification under §§4603.3(e) and 4700.11;

(d) If the Director determines that the levels of financial responsibility required by §4407.19(a) or 4407.19(b) are not consistent with the degree and duration of risk associated with treatment, storage or disposal, at the facility or group of facilities, the Director may adjust the level of financial responsibility required under §4407.19(a) or 4407.19(b) as may be necessary to protect human health and the environment. This adjusted level shall be based on the Director's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. If the Director determines that there is a significant risk to human health and the environment from nonsudden accidental occurrences resulting from the operations of a facility, he or she may require that an owner or operator of the facility comply with paragraph (b) of this subsection. An owner or operator shall furnish to the Director, within a reasonable time, any information which the Director requests to determine whether cause exists for such adjustments of level or type of coverage. Any adjustment of the level or type of coverage for a facility that has a permit shall be treated as a permit modification under §§4603.3(e) and 4700.11;

(e) Within sixty (60) days after receiving certifications from the owner or operator and an independent registered professional engineer that final closure has been completed in accordance with the approved closure plan, the Director will notify the owner or operator in writing that he or she is no longer required by this section to maintain liability coverage for that facility unless the Director has reason to believe that closure has not been in accordance with the approved closure plan;

(f) An owner or operator may satisfy the requirements of this section by demonstrating that he or she passes a financial test as specified in this paragraph. To pass this test the owner or operator shall meet the criteria of paragraphs (f)(1) or (f)(2) of this section:

(1) The owner or operator shall have the following:

(A) Net working capital and tangible net worth each at least six (5) times the amount of liability coverage to be demonstrated by this test;

(B) Tangible net worth of at least ten million dollars ($10,000,000); and

(C) Assets in the United States amounting to either at least ninety percent (90%) of his or her total assets; or at least six (6) times the amount of liability coverage to be demonstrated by this test;

(2) The owner or operator shall have the following:

(A) A current rating for his or her most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's, or Aaa, Aa, A, or Baa as issued by Moody's;

(B) Tangible net worth of at least ten million dollars ($10,000);

(C) Tangible net worth at least six (6) times the amount of liability coverage to be demonstrated by this test; and

(D) Assets in the United States amounting to either at least ninety percent (90%) of his or her total assets; or at least six (6) times the amount of liability coverage to be demonstrated by this test;

(3) The phrase "amount of liability coverage" as used in §4407.19(f) refers to the annual aggregate amounts for which coverage is required under §§4407.19(a) and (b);

(4) To demonstrate that he or she meets this test, the owner or operator shall submit the following three (3) items to the Director:

(A) A letter signed by the owner's or operator's chief financial officer and worded as specified in §4407.22(g). If an owner or operator is using the financial test to demonstrate both assurance for closure or post-closure care, as specified by §§4407.12(e) and 4407.17(e), 4407.12(f) and 4407.17(f), and liability coverage, he or she shall submit the letter specified in §4407.22(g) to cover both forms of financial responsibility; a separate letter as specified in §4407.22(f) is not required;

(B) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year; and

(C) A special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:

(i) He or she has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and

(ii) In connection with that procedure, no matters came to his or her attention which caused him or her to believe that the specified data should be adjusted;

(5) An owner or operator of a new facility shall submit the items specified in §4407.19(f)(4) to the Director at least sixty (60) days before the date on which hazardous waste is first received for treatment, storage or disposal;

(6) After the initial submission of items specified in §4407.19(f)(4), the owner or operator shall send updated information to the director within ninety (90) days after the close of each succeeding fiscal year. This information shall consist of all three (3) items specified in §4407.19(f)(4);

(7) If the owner or operator no longer meets the requirements of §4407.19(f), he or she shall obtain insurance for the entire amount of required liability coverage as specified in this section. Evidence of insurance shall be submitted to the Director within ninety (90) days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the test requirements; and

(8) The Director may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified

public accountant in his or her report on examination of the owner's or operator's financial statements (see §4407.19(f) (4)(B)). An adverse opinion or a disclaimer of opinion shall be cause for disallowance. The Director shall evaluate other qualifications on an individual basis. The owner or operator shall provide evidence of insurance for the entire amount for the required liability coverage as specified in this section within thirty (30) days after notification of the disallowance; or

(g) An owner or operator may meet the requirements of this section by obtaining a written guarantee. The guarantor shall be the parent corporation of the owner or operator. The guarantor shall meet the requirements for owners or operators in §§4407.19(f) through 4407.19(f)(8) and shall comply with the terms of the corporate guarantee. The wording of the corporate guarantee shall be identical to the wording specified in §4407.24. A certified copy of the corporate guarantee shall accompany the items sent to the Director as specified in §4407.19(f)(4). The terms of the corporate guarantee shall provide that:

(1) If the owner or operator fails to satisfy a judgment based on a determination of liability for bodily injury or property damage to third parties caused by sudden or nonsudden accidental occurrences (or both as the case may be) arising from the operation of facilities covered by this corporate guarantee, or fails to pay an amount agreed to in settlement of claims arising from or alleged to arise from the injury or damage, the guarantor will do so up to the limits of coverage;

(2) The corporate guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator and to the Director. This guarantee may not be terminated unless and until the Director approves alternate liability coverage complying with §4407.19;

(3) In the case of corporations:

(A) Incorporated in the United States, a corporate guarantee may be used to satisfy the requirements of this section only if the Attorney General or Insurance Administrator of the state in which the guarantor is incorporated and the D.C. Corporation Counsel or the Superintendent of Insurance has submitted a written statement to the Director that a corporate guarantee executed as described in this section and §4407.24 is a legally valid and enforceable obligation in that state; and

(B) Incorporated outside the United States, a corporate guarantee may be used to satisfy the requirements of this section only if the non-U.S. corporation has identified a registered agent for service of process in the District and in the state in which the guarantor corporation has its principal place of business, and the D.C. Corporation Counsel or Superintendent of Insurance and the Attorney General or Insurance Commissioner of the State in which the guarantor corporation has its principal place of business have submitted a written statement to the Department that a corporate guarantee executed as described in this section and §4407.24 is a legally valid and enforceable obligation in that state.

4407.20 An owner or operator shall notify the Director by certified mail of the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the owner or operator as debtor, within ten (10) days after commencement of the proceeding. A guarantor of a corporate guarantee as specified in §§4407.12(f) and 4407.17(f) shall make such a notification if he or she is named as debtor, as required under the terms of the corporate guarantee (see §4407.22(h)).

4407.21 An owner or operator who fulfills the requirements of §4407.12, 4407.17 or 4407.19 by obtaining a trust fund, surety bond, letter of credit, or insurance policy shall be deemed to be without the required financial assurance or liability coverage in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as trustee or of the institution issuing the surety bond, letter of credit, or insurance policy to issue such instruments. The owner or operator shall establish other financial assurance or liability coverage within sixty (60) days after the event.

4407.22 The following paragraphs (a through g) describe how to word a trust agreement; a surety bond guaranteeing payment into a trust fund; a surety bond guaranteeing performance of closure or post-closure care; a letter of credit; a certificate of insurance; a letter from the chief financial officer; a corporate guarantee; a hazardous waste facility liability endorsement; and a certificate of liability insurance:

(a) A trust agreement for a trust fund, as specified in §4407.12(a) or 4407.17(a) shall be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

TRUST AGREEMENT

Trust Agreement, the "Agreement," entered into as of [date] by and between [name of the owner or operator], a [name of state] [insert "corporation," "partnership," "association," or "proprietorship"], the "Grantor," and [name of corporate trustee], [insert "incorporated in the State of" or "a national bank"], the "Trustee."

Whereas the Department of Consumer and Regulatory Affairs, hereinafter referred to as "the Department," has established certain regulations applicable to the Grantor, requiring that an owner or operator of a hazardous waste management facility will provide assurance that funds shall be available when needed for closure and/or post-closure care of the facility.

Whereas, the Grantor has elected to establish a trust to provide all or part of such financial assurance for the facilities identified herein.

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee.

Now, Therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions as used in this Agreement:

(a) The term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor; and

(b) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

4407.22 (Continued)

Section 2. Identification of Facilities and Cost Estimates. This Agreement pertains to the facilities and cost estimates identified on the attached Schedule A [on Schedule A, for each facility list the EPA Identification Number, name, address, and the current closure and/or post-closure cost estimates, or portions thereof, for which financial assurance is demonstrated by this Agreement].

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of the Department. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. The property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, **IN TRUST**, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the Department.

Section 4. Payment for Closure and Post-Closure Care. The Trustee shall make payments from the Fund as the Director of the Department (Director) shall direct, in writing, to provide for the payment of the costs of closure and/or post-closure care of the facilities covered by this Agreement. The Trustee shall reimburse the Grantor or other persons as specified by the Director from the Fund for closure and post-closure expenditures in such amounts as the Director shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the Director specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee.

Section 6. Trustee Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his or her duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(a) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2.(a), shall not be acquired or held, unless they are securities or other obligations of the Federal or a state government;

(b) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or State government; and

4407.22 (Continued)

(c) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time-to-time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 *et. seq.*, including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of the Trustee. Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depositary even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depositary with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or state government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

4407.22 (Continued)

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation. The Trustee shall annually, at least thirty (30) days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the Director a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than sixty (60) days prior to the anniversary date of establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within ninety (90) days after the statement has been furnished to the Grantor and the Director shall constitute a conclusively binding assent by the Grantor barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time-to-time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time-to-time with the Grantor.

Section 13. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the Director, and the present Trustee by certified mail ten (10) days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in §9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendment to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the Director to the Trustee shall be in writing, signed by the Director, or his or her designee, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the Department hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the Department, except as provided for herein.

4407.22 (Continued)

Section 15. Notice of Nonpayment. The Trustee shall notify the Grantor and the Director, by certified mail within ten (10) days following the expiration of the thirty-day (30) period after the anniversary of the establishment of the Trust, if no payment is received from the Grantor during that period. After the pay-in period is completed, the Trustee shall not be required to send a notice of nonpayment.

Section 16. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the Director, or by the Trustee and the Director if the Grantor ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in §16, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the Director, or by the Trustee and the Director, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

Section 18. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the Director issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 19. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of the District of Columbia.

Section 20. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness Whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written: The parties below certify that the wording of this Agreement is identical to the wording specified in 20 DCMR §4407.22(a) as such regulations were constituted on the date first above written.

[Signature of Grantor]
[Title]

Attest:

[Title]
[Seal]

[Signature of Trustee]

Attest:

[Title]
[Seal]

[The following is an example of the certification of acknowledgment which shall accompany the trust agreement for a trust fund as specified in §4407.12(a) or 4407.17(a).]

State of _____

4407.22 (Continued)

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that he or she resides at [address], that he or she is [title] of [corporation], the corporation described in and which executed the above instrument; that he or she knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that he or she signed his or her name thereto by like order.

[Signature of Notary Public]

(b) A surety bond guaranteeing payment into a trust fund, as specified in §4407.12(b) or 4407.17(b) shall be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

FINANCIAL GUARANTEE BOND

Date bond executed: _____
Effective date:_____

Principal: [legal name and business address of owner or operator]

Type of organization: [insert "individual," "joint venture," "partnership," or "corporation"]
State of incorporation: _____
Surety(ies): [name(s) and business address(es)]

EPA Identification Number, name, address, and closure and/or post-closure amount(s) for each facility guaranteed by this bond [indicate closure and post-closure amounts separately]:_____

Total penal sum of bond: $_____

Surety's bond number: _____

Know All Persons By These Presents, That We, the Principal and Surety(ies) hereto are firmly bound to the Department of Consumer and Regulatory Affairs, in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; Provided, that where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said Principal is required, under the D.C. Hazardous Waste Management Act as amended (HWMA), to have a permit or interim status in order to own or operate each hazardous waste management facility identified above;

4407.22 (Continued)

Whereas said principal is required to provide financial assurance for closure, or closure and post-closure care, as a condition of the permit or interim status;

Whereas said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, Therefore, the conditions of the obligation are such that if the Principal shall faithfully, before the beginning of final closure of each facility identified above, fund the standby trust fund in the amount(s) identified above for the facility; and

Or, if the Principal shall fund the standby trust fund in such amount(s) within fifteen (15) days after a final order to begin closure is issued by the Director or the D.C. Superior Court or other court of competent jurisdiction.

(c) A surety bond guaranteeing performance of closure or post-closure care, as specified in §4407.12(c) or 4407.17(c), shall be worded as follows, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted:

PERFORMANCE BOND

Date bond executed: _____
Effective date:_____
Principal: [legal name and business address of owner or operator]
Type of organization: [insert "individual," "joint venture," " partnership," or "corporation"]
State of incorporation: _____
Surety(ies): [name(s) and business address(es)]____
_____
EPA Identification Number, name, address, and closure or post-closure amount(s) for each facility guaranteed by this bond [indicate closure and post-closure amounts separately]:__
_____
Total penal sum of bond: $
Surety's bond number: _____

Know All Persons By These Presents, That We, the Principal and Surety(ies) hereto are firmly bound to the Department of Consumer and Regulatory Affairs (Department) in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said Principal is required, under the D.C. Hazardous Waste Management Act (HWMA) as amended, to have a permit in order to own or operate each hazardous waste management facility identified above.

Whereas said Principal is required to provide financial assurance for closure, or closure and post-closure care, as a condition of the permit.

4407.22 (Continued)

Whereas said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance.

Now, Therefore, the conditions of this obligation are such that if the Principal shall faithfully perform closure, whenever required to do so, of each facility for which this bond guarantees closure, in accordance with the closure plan and other requirements of the permit as such plan and permit may be amended, pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules and regulations may be amended.

And, if the Principal shall faithfully perform post-closure care of each facility for which this bond guarantees post-closure care, in accordance with the post-closure plan and other requirements of the permit, as such plan and permit may be amended, pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended.

Or, if the Principal shall provide alternate financial assurance as specified in 20 DCMR §4407 and obtain the Director's written approval of such assurance, within ninety (90) days after the date notice of cancellation is received by both the Principal and the Director of the Department (Director) from the Surety(ies), then this obligation shall be null and void, otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above.

Upon notification by the Director that the Principal has been found in violation of the closure requirements of 20 DCMR, Chapter 44, for a facility for which this bond guarantees performance of closure, the Surety(ies) shall either perform closure in accordance with the closure plan and other permit requirements or place the closure amount guaranteed for the facility into the standby trust fund as directed by the Director.

Upon notification by the Director that the Principal has been found in violation of the post-closure requirements of 20 DCMR, Chapter 44 for a facility for which this bond guarantees performance of post-closure care, the Surety(ies) shall either perform post-closure care in accordance with the post-closure plan and other permit requirements or place the post-closure amount guaranteed for the facility into the standby trust fund as directed by the Director.

Upon notification by the Director that the Principal has failed to provide alternate financial assurance as specified in 20 DCMR §4407 and obtain written approval of such assurance from the Director during the ninety (90) days following receipt by both the Principal and the Director of a notice of cancellation of the bond, the Surety(ies) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund as directed by the Director.

The Surety(ies) hereby waive(s) notification of amendments to closure plans, permits, applicable laws, statutes, rules, and regulations and agree(s) that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

4407.22 (Continued)

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Director; Provided, however, that cancellation shall not occur during the one hundred twenty (120) days beginning on the date of receipt of the notice of cancellation by both the Principal and the Director, as evidenced by the return receipts.

The principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the Director.

[The following paragraph is an optional rider that may be included but is not required.]

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new closure and/or post-closure amount; Provided, that the penal sum does not increase by more than twenty percent (20%) in any one year, and no decrease in the penal sum takes place without the written permission of the Director.

In Witness Whereof, The Principal and Surety(ies) have executed this Performance Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in 20 DCMR §4407.22(c) as such regulation was constituted on the date this bond was executed.

Principal

[Signature(s)]
[Name(s)]
[Title(s)]
[Corporate seal]

Corporate Surety(ies)

[Name and address]
State of Incorporation: _____
Liability limit: $ _____
[Signature(s)]
[Name(s) and title(s)]
[Corporate seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]
Bond premium: $ _____

(d) A letter of credit, as specified in §4407.12(d) or 4407.17(d) shall be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

4407.22 (Continued)

IRREVOCABLE STANDBY LETTER OF CREDIT

Director
The Department of Consumer and Regulatory Affairs
District of Columbia
Dear Sir or Madam:

We hereby establish our Irrevocable Standby Letter of Credit No.____ in your favor, at the request and for the account of [owner's or operator's name and address] up to the aggregate amount of [in words] U.S. dollars $_____, available upon presentation of

(1) Your sight draft, bearing reference to this letter of credit No.____; and

(2) Your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of the D.C. Hazardous Waste Management Act as amended."

This letter of credit is effective as of [date] and shall expire on [date at least one year later], but such expiration date shall be automatically extended for a period of [at least one year] on [date] and on each successive expiration date, unless, at least one hundred twenty (120) days before the current expiration date, we notify both you and [owner's or operator's name] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event you are so notified, any unused portion of the credit shall be available upon presentation of your sight draft for one hundred twenty (120) days after the date of receipt by both you and [owner's or operator's name], as shown on the signed return receipts.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of [owner's or operator's name] in accordance with your instructions.

We certify that the wording of this letter of credit is identical to the wording specified in 20 DCMR §4407.22(d) as such regulations were constituted on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution] [Date].

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published by the International Chamber of Commerce," or "the Uniform Commercial Code"].

(e) A certificate of insurance, as specified in §4407.12(e) or 4407.17(e) shall be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

CERTIFICATE OF INSURANCE FOR
CLOSURE OR POST-CLOSURE CARE

Name and Address of Insurer
(herein called the "Insurer"):
Name and Address of Insured
(herein called the "Insured"):

4407.22 (Continued)

Facilities Covered: [List for each facility: The EPA Identification Number, name, address, and the amount of insurance for closure and/or the amount for post-closure care (these amounts for all facilities covered shall total the face amount shown below).]

Face Amount: _____
Policy Number: _____
Effective Date: _____

The Insurer hereby certifies that it has issued to the Insured the policy of insurance identified above to provide financial assurance for [insert "closure" or "closure and post-closure care" or "post-closure care"] for the facilities identified above. The Insurer further warrants that such policy conforms in all respects with the requirements of 20 DCMR §4407.12(e) or 4407.17(e), as applicable and as such regulations were constituted on the date shown immediately below. It is agreed that any provision of the policy inconsistent with such regulations is hereby amended to eliminate such inconsistency.

Whenever requested by the Director of the Department of Consumer and Regulatory Affairs, the Insurer agrees to furnish to the Director a duplicate original of the policy listed above, including all endorsements thereon.

I hereby certify that the wording of this certificate is identical to the wording specified in 20 DCMR §4407.22(e) as such regulations were constituted on the date shown immediately below.

[Authorized signature for Insurer]
[Name of person signing]
[Title of person signing]
Signature of witness or notary: _____
[Date]

(f) A letter from the chief financial officer, as specified in 20 DCMR §4407.12(f) or 4407.17(f), shall be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

LETTER FROM CHIEF FINANCIAL OFFICER

[Address to the Director of the Department of Consumer and Regulatory Affairs]

I am the chief financial officer of [name and address of firm]. This letter is in support of this firm's use of the financial test to demonstrate financial assurance, as specified in 20 DCMR §4407.

[Fill out the following four (4) paragraphs regarding facilities and associated cost estimates. If your firm has no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its EPA Identification Number, name, address, and current closure and/or post-closure cost estimates. Identify each cost estimate as to whether it is for closure or post-closure care.]

1. This firm is the owner or operator of the following facilities for which financial assurance for closure or post-closure care is demonstrated through the financial test specified in 20 DCMR §4407. The current closure and/or post-closure cost estimates covered by the test are shown for each facility: ____.

4407.22 (Continued)

2. This firm guarantees, through the corporate guarantee specified in 20 DCMR §4407, the closure or post-closure care of the following facilities owned or operated by subsidiaries of this firm. The current cost estimates for the closure or post-closure care so guaranteed are shown for each facility:____.

3. This firm as the owner or operator or guarantor, is demonstrating financial assurance for the closure or post-closure care of the following facility through the use of a test equivalent or substantially equivalent to the financial test specified in 20 DCMR §4407. The current closure and/or post-closure cost estimates covered by such a test are shown for each facility: ____.

4. This firm is the owner or operator of the following hazardous waste management facilities for which financial assurance for closure or, if a disposal facility, post-closure care, is not demonstrated to the Department of Consumer and Regulatory Affairs through the financial test or any other financial assurance mechanism specified in 20 DCMR §4407. The current closure and/or post-closure cost estimates not covered by such financial assurance are shown for each facility: _____.

This firm [insert "is required" or "is not required"] to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this firm ends on [month, day]. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended [date].

[Fill in Alternative I if the criteria of 20 DCMR §4407.12(f) or 4407.17(f)(1) are used. Fill in Alternative II if the criteria of §4407.12(f)(2) or 4407.17(f)(2) are used.]

Alternative I

1. Sum of current closure and post-closure cost estimates [total of all cost estimates shown in the four paragraphs above] _____ $_____

*2. Total liabilities [if any portion of the closure or post-closure cost estimates is included in total liabilities, you may deduct the amount of that portion from this line and add that amount to lines 3 and 4] _____

*3. Tangible net worth _____

*4. Net worth _____

*5. Current assets _____

*6. Current liabilities _____

7. Net working capital [line 5 minus line 6] _____

*8. The sum of net income plus depreciation, depletion, and amortization _____.

*9. Total assets in U.S. (required only if less than 90% of firm's assets are located in the U.S.)

4407.22 (Continued)

		Yes	No
10.	Is line 3 at least $10 million?	—	—
11.	Is line 3 at least 6 times line 1?	—	—
12.	Is line 7 at least 6 times line 1?	—	—
*13.	Are at least 90% of firm's assets located in the U.S.? If not, complete line 14.	—	—
14.	Is line 9 at least 6 times line 1?	—	—
15.	Is line 2 divided by line 4 less than 2.0?	—	—
16.	Is line 8 divided by line 2 greater than 0.1?	—	—
17.	Is line 5 divided by line 6 greater than 1.5?	—	—

Alternative II

1. Sum of current closure and post-closure cost estimates [total of all cost estimates shown in the four paragraphs above]_____$_____

2. Current bond rating of most recent issuance of this firm and name of rating service ____

3. Date of issuance of bond ____

4. Date of maturity of bond ____

*5. Tangible net worth [if any portion of the closure and post-closure cost estimates is included in "total liabilities" on your firm's financial statements, you may add the amount of that portion to this line] $____

*6. Total assets in U.S. (required only if less than ninety percent (90%) of firm's assets are located in the U.S.) $___

		Yes	No
7.	Is line 5 at least $10 million?	—	—
8.	Is line 5 at least 6 times line 1?	—	—
*9.	Are at least 90% of firm's assets located in the U.S.? If not, complete line 10	—	—
10.	Is line 6 at least 6 times line 1?	—	—

4407.22 (Continued)

I hereby certify that the wording of this letter is identical to the wording specified in 20 DCMR §4407.22(f) as such regulations were constituted on the date shown immediately below.

[Signature]
[Name]
[Title]
[Date]

(g) A letter from the chief financial officer, as specified in §4407.19(f) shall be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

LETTER FROM CHIEF FINANCIAL OFFICER

[Address to the Director of the Department of Consumer and Regulatory Affairs]

I am the chief financial officer of [CFO's firm name and address]. This letter is in support of the use of the financial test to demonstrate financial responsibility for liability coverage [insert "and closure and/or post-closure care" if applicable] as specified in 20 DCMR §4407.

[Fill out the following paragraphs regarding facilities and liability coverage. If there are no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its EPA Identification Number, name, and address.].

The firm identified above is the owner or operator of the following facilities for which liability coverage for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences is being demonstrated through the financial test specified in 20 DCMR §4407:_____.

The firm identified above guarantees, through the corporate guarantee specified in 20 DCMR §4407, liability coverage for [insert "sudden" or "non-sudden" "or both sudden and nonsudden"] accidental occurrences at the following facilities owned or operated by the following subsidiaries of the firm:_____.

[If you are using the financial test to demonstrate coverage of both liability and closure and post-closure care, fill in the following four (2) paragraphs regarding facilities and associated closure and post-closure cost estimates. If there are no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its EPA Identification Number, name, address, and current closure and/or post-closure cost estimates. Identify each cost estimate as to whether it is for closure or post-closure care.]

1. The firm identified above owns or operates the following facilities for which financial assurance for closure or post-closure care is demonstrated through the financial test specified in 20 DCMR §4407. The current closure and/or post-closure cost estimates covered by the test are shown for each facility: ____.

4407.22 (Continued)

2. The firm identified above guarantees, through the corporate guarantee specified in 20 DCMR §4407, the closure and post-closure care of the following facilities owned or operated by its subsidiaries. The current cost estimates for the closure or post-closure care so guaranteed are shown for each facility: _____.

3. The firm identified above demonstrates financial assurance for the closure or post-closure care of the following facilities through the use of a test equivalent or substantially equivalent to the financial test specified in 20 DCMR §4407. The current closure or post-closure cost estimates covered by such a test are shown for each facility: ____.

4. The firm identified above owns or operates the following hazardous waste management facilities for which financial assurance for closure or, if a disposal facility, post-closure care, is not demonstrated to the District of Columbia through the financial test or any other financial assurance mechanism specified in 20 DCMR §4407. The current closure and/or post-closure cost estimates not covered by such financial assurance are shown for each facility: _____.

   This firm [insert "is required" or "is not required"] to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

   The fiscal year of this form ends on [month, day]. The figures for the following items marked with an asterisk are derived from this owner's or operator's independently audited, year-end financial statements for the latest completed fiscal year, ended [date].

4407.23 A corporate guarantee, as specified in §4407.12(f) or 4407.17(f), shall be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

CORPORATE GUARANTEE FOR CLOSURE OR POST-CLOSURE CARE

Guarantee made this [date] by [name of guaranteeing entity], a business corporation organized under the laws of the State of [insert name of state], herein referred to as guarantor, to the Department of Consumer and Regulatory Affairs (The Department), obligee, on behalf of our subsidiary [owner or operator] of [business address].

Recitals

1. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in 20 DCMR §§4407.12(f) and 4407.17(f).

2. [Owner or operator] owns or operates the following hazardous waste management facility(ies) covered by this guarantee: [List or each facility: EPA Identification Number, name, and address. Indicate for each whether guarantee is for closure, post-closure care, or both.]

3. "Closure plans" and "post-closure plans" as used below refer to the plans maintained as required by 20 DCMR §4408, for the closure and post-closure care of facilities as identified above.

4407.23 (Continued)

4. For value received from [owner or operator], guarantor guarantees to the Department that in the event that [owner or operator] fails to perform [insert "closure," "post-closure care" or "closure and post-closure care"] of the above facility(ies) in accordance with the closure or post-closure plans and other permit or interim status requirements whenever required to do so, the guarantor shall do so or establish a trust fund as specified 20 DCMR §4407, as applicable, in the name of [owner or operator] in the amount of the current closure or post-closure cost estimates as specified in 20 DCMR §4407.

5. Guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send within ninety (90) days, by certified mail, notice to the Director of the Department (Director) and to [owner or operator] that he or she intends to provide alternate financial assurance as specified in 20 DCMR §4407, as applicable, in the name of [owner or operator]. Within one hundred twenty (120) days after the end of the fiscal year, the guarantor shall establish such financial assurance unless [owner or operator] has done so.

6. The guarantor agrees to notify the Director by certified mail, of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming guarantor as debtor, within ten (10) days after commencement of the proceeding.

7. Guarantor agrees that within thirty (30) days after being notified by the Director of a determination that guarantor no longer meets the financial test criteria or that he or she is disallowed from continuing as a guarantor of closure or post-closure care, he or she shall establish alternate financial assurance as specified in 20 DCMR §4407, as applicable, in the name of [owner or operator] unless [owner or operator] has done so.

8. Guarantor agrees to remain bound under this guarantee notwithstanding any or all of the following: amendment or modification of the closure or post-closure plan, amendment or modification of the permit, the extension or reduction of the time of performance of closure or post-closure, or any other modification or alteration of an obligation of the owner or operator pursuant to 20 DCMR §4407.

9. Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] shall comply with the applicable financial assurance requirements of 20 DCMR §4407, for the above-listed facilities, except that guarantor may cancel this guarantee by sending notice by certified mail to the Director and to [owner or operator], such cancellation to become effective no earlier than one hundred twenty (120) days after receipt of such notice by both the Department and [owner or operator], as evidenced by the return receipts.

10. Guarantor agrees that if [owner or operator] fails to provide alternate financial assurance as specified in 20 DCMR §4407 or as applicable, and obtain written approval of such assurance from the Director within ninety (90) days after a notice of cancellation by the guarantor is received by the Director from guarantor, guarantor shall provide such alternate financial assurance in the name of [owner or operator].

11. Guarantor expressly waives notice of acceptance of this guarantee by the EPA or by [owner or operator]. Guarantor also expressly waives notice of amendments or modifications of the closure and/or post-closure plan and of amendments or modifications of the facility permit(s).

4407.23 (Continued)

I hereby certify that the wording of this guarantee is identical to the wording specified in 20 DCMR §4407.23(a) as such regulations were constituted on the date first above written.

Effective date _____
[Name of guarantor]
[Authorized signature for guarantor]
[Name of person signing]
[Title of person signing]
Signature of witness or notary: _____

4407.24 A corporate guarantee, as specified in §4407.19(g) shall be worded as follows, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted:

CORPORATE GUARANTEE FOR LIABILITY COVERAGE

Guarantee made this (date) by [name of guaranteeing entity], a business corporation organized under the laws of [if incorporated within the United States insert "the State of --" and insert name of State, if incorporated outside the United States insert the name of the country in which incorporated, the principal place of business within the United States, and the name and address of the registered agent in the state of the principal place of business], herein referred to as "guarantor." This guarantee is made on behalf of our subsidiary [owner or operator] of [business address], to any and all third parties who have sustained or may sustain bodily injury or property damage caused by [sudden and/or nonsudden] accidental occurrences arising from operation of the facility(ies) covered by this guarantee.

Recitals

1. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in 20 DCMR §4407.19(g).

2. [Owner or operator] owns or operates the following hazardous waste management facility(ies) covered by this guarantee: [List for each facility: EPA Identification Number, name, and address; and if guarantor is incorporated outside the United States list the name and address of the guarantor's registered agent in each State]. This corporate guarantee satisfies RCRA third party liability requirements for [insert"sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences in above-named owner or operator facilities for coverage in the amount of [insert dollar amount] for each occurrence and [insert dollar amount] annual aggregate.

3. For value received from [owner or operator], guarantor guarantees to any and all third parties who have sustained or may sustain bodily injury or property damage caused by [sudden and/or nonsudden] accidental occurrences arising from operations of the facility(ies) covered by this guarantee that in the event that [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by [sudden and/or nonsudden] accidental occurrences arising from the operation of the above-named facilities, or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor will satisfy such judgment(s), award(s) or settlement agreement(s) up to the limits of coverage identified above.

4407.24 (Continued)

4. Guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send within ninety (90) days, by certified mail, notice to the Director of the Department of Consumer and Regulatory Affairs (Director) and to [owner or operator] that he or she intends to provide alternate liability coverage as specified in 20 DCMR §4407.19, as applicable, in the name of [owner or operator]. Within one hundred twenty (120) days after the end of such fiscal year, the guarantor shall establish such liability coverage unless [owner or operator] has done so.

5. The guarantor agrees to notify the Director by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming guarantor as debtor, within ten (10) days after commencement of the proceeding.

6. Guarantor agrees that within thirty (30) days after being notified by the Director of a determination that guarantor no longer meets the financial test criteria or that he or she is disallowed from continuing as a guarantor, he or she shall establish alternate liability coverage as specified in 20 DCMR §4407.19 in the name of [owner or operator], unless [owner or operator] has done so.

7. Guarantor reserves the right to modify this agreement to take into account amendment or modification of the liability requirements set by 20 DCMR §4407.19; Provided, that such modification shall become effective only if the Director does not disapprove the modification within thirty (30) days of receipt of notification of the modification.

8. Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] must comply with the applicable requirements of 20 DCMR §4407.19 for the above-listed facility(ies), except as provided in paragraph 9 of this agreement.

9. Guarantor may terminate this guarantee by sending notice by certified mail to the Director and to [owner or operator]; Provided, that this guarantee may not be terminated unless and until [the owner or operator] obtains, and the Director approve[s] alternate liability coverage complying with 20 DCMR §4407.19.

10. Guarantor hereby expressly waives notice of acceptance of this guarantee by any party.

11. Guarantor agrees that this guarantee is in addition to and does not affect any other responsibility or liability of the guarantor with respect to the covered facilities.

12. Exclusions:

This corporate guarantee does not apply to:

(A) Bodily injury or property damage for which the owner or operator is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that the owner or operator would be obligated to pay in the absence of the contract or agreement;

(B) Any obligation of the owner or operator under a workers' compensation, disability benefits, or unemployment compensation law or any similar law;

4407.24 (Continued)

(C) Bodily injury to:

(i) An employee of the owner or operator arising from, and in the course of, employment by the owner or operator; or

(ii) The spouse, child, parent, brother or sister of that employee as a consequence of, or arising from, and in the course of, employment by the owner or operator.

This exclusion applies:

(1) Whether the owner or operator may be liable as an employer or in any other capacity; and

(2) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (i) and (ii);

(D) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.

(E) Property damage to:

(i) Any property owned, rented, or occupied by the owner or operator;

(ii) Premises that are sold, given away or abandoned by the owner or operator if the property damage arises out of any part of those premises;

(iii) Property loaned to the owner or operator;

(iv) Personal property in the care, custody or control of the owner or operator;

(v) That particular part of real property on which the owner or operator or any contractors or subcontractors working directly or indirectly on behalf of the owner or operator are performing operations, if the property damage arises out of these operations.

I hereby certify that the wording of the guarantee is identical to the wording specified in 20 DCMR §4407.24.

Effective date:_____
[Name of guarantor]
[Authorized signature for guarantor]
[Name of person signing]
[Title of person signing]
Signature of witness or notary:

4407.25 A hazardous waste facility liability endorsement as required in §4407.19 shall be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

4407.25 (Continued)

HAZARDOUS WASTE FACILITY LIABILITY ENDORSEMENT

1. This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering bodily injury and property damage in connection with the insured's obligation to demonstrate financial responsibility under 20 DCMR §4407.19. The coverage applies at [list EPA Identification Number, name, and address for each facility] for [insert "sudden accidental occurrences," "nonsudden accidental occurrences," "sudden and nonsudden accidental occurrences," if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for nonsudden accidental occurrences, and which are insured for both]. The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's liability], exclusive of legal defense costs; and

2. The insurance afforded with respect to such occurrences is subject to all of the terms and conditions of the policy; Provided, however, that any provisions of the policy inconsistent with subsections (a) through (e) of this paragraph 2 are hereby amended to conform with subsections (a) through (e):

   (a) Bankruptcy or insolvency of the insured shall not relieve the Insurer of its obligations under the policy to which this endorsement is attached;

   (b) The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the insured for any such payment made by the Insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in 20 DCMR §4407.19(f);

   (c) Whenever requested by the Director of the Department of Consumer and Regulatory Affairs (Director), the Insurer agrees to furnish to the Director a signed duplicate original of the policy and all endorsements;

   (d) Cancellation of this endorsement whether by the Insurer or the insured, will be effective only upon written notice and only after the expiration of sixty (60) days after a copy of such written notice is received by the Director;

   (e) Any other termination of this endorsement will be effective only upon written notice and only after the expiration of thirty (30) days after a copy of such written notice is received by the Director. Attached to and forming part of policy No. _____ issued by [name of Insurer], herein called the Insurer, of [address of Insurer] to [name of insured] of [address] this ___ day of ____, 19__. The effective date of said policy is ___ day of ___, 19__.

   I hereby certify that the wording of this endorsement is identical to the wording specified in 20 DCMR §4407.25 as such regulation was constituted on the date first above written, and that the Insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States.

   [Signature of Authorized Representative of Insurer]
   [Type name]
   [Title], Authorized Representative of [name of Insurer]
   [Address of Representative]

4407.26 A certificate of liability insurance as required in §4407.19 shall be worded as follows, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted:

HAZARDOUS WASTE FACILITY CERTIFICATE OF LIABILITY INSURANCE

1. [Name of Insurer], (the "Insurer"), of [address of Insurer] hereby certifies that it has issued liability insurance covering bodily injury and property damage to [name of insured], (the "insured"), of [address of insured] in connection with the insured's obligation to demonstrate financial responsibility under 20 DCMR §4407.19. The coverage applies at [list EPA Identification Number, name, and address for each facility] for [insert "sudden accidental occurrences," "nonsudden accidental occurrences" or "sudden and nonsudden accidental occurrences"; if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for nonsudden accidental occurrences, and which are insured for both]. The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's liability], exclusive of legal defense costs. The coverage is provided under policy number ___, issued on [date]. The effective date of said policy is [date].

2. The Insurer further certifies the following with respect to the insurance described in paragraph 1:

   (a) Bankruptcy or insolvency of the insured shall not relieve the Insurer of its obligations under the policy;

   (b) The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the insured for any such payment made by the Insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in 20 DCMR §4407.19(f);

   (c) Whenever requested by the Director of the Department of Consumer and Regulatory Affairs, the Insurer agrees to furnish to the Director a signed duplicate original of the policy and all endorsements;

   (d) Cancellation of the insurance, whether by the Insurer or the insured, will be effective only upon written notice and only after the expiration of sixty (60) days after a copy of such written notice is received by the Director; and

   (e) Any other termination of the insurance will be effective only upon written notice and only after the expiration of thirty (30) days after a copy of such written notice is received by the Director.

I hereby certify that the wording of this instrument is identical to the wording specified in 20 DCMR §4407.26 as such regulation was constituted on the date first above written, and that the Insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in the District of Columbia.

[Signature of authorized representative of Insurer]
[Type name]
[Title], Authorized Representative of [name of Insurer]
[Address of Representative]

SOURCE: Final Rulemaking published at 43 DCR 1077 (March 1, 1996), incorporating by reference the text of Chapters 40 through 54.

4408 USE AND MANAGEMENT OF CONTAINERS

4408.1 The regulations in this section shall apply to owners and operators of all hazardous waste facilities that store containers of hazardous waste, except as §§4400.1 through 4400.7 provides otherwise.

4408.2 Under §§4100.35 through 4100.39 and 4103.7(c), if a hazardous waste is emptied from a container the residue remaining in the container shall not be considered a hazardous waste if the container is "empty." In that event, management of the container is exempt from the requirements of this section.

4408.3 If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the owner or operator shall transfer the hazardous waste from this container to a container that is in good condition or manage the waste in some other way that complies with the requirements of this section.

4408.4 The owner or operator shall use a container made of or lined with materials which shall not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.

4408.5 A container holding hazardous waste shall always be closed during storage, except when it is necessary to add or remove waste.

4408.6 A container holding hazardous waste shall not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.

4408.7 At least weekly, the owner or operator shall inspect areas where containers are stored, looking for leaking containers and for deterioration of containers and the containment system caused by corrosion or other factors.

4408.8 Container storage areas shall have a containment system that is designed and operated in accordance with §4408.9, except as otherwise provided by §4408.10.

4408.9 A containment system shall be designed and operated as follows:

(a) A base shall underlay the containers which is free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed;

(b) The base shall be sloped or the containment system shall be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids;

(c) The containment system shall have sufficient capacity to contain ten percent (10%) of the volume of containers or the volume of the largest container, whichever is greater. Containers that do not contain free liquids need not be considered in this determination;

(d) Run-on into the containment system shall be prevented unless the collection system has sufficient excess capacity in addition to that required in §4408.9(c) to contain any run-on which might enter the system;

(e) Spilled or leaked waste and accumulated precipitation shall be removed from the sump or collection area in as timely a manner as is necessary to prevent over flow of the collection system; and

(f) If the collected material is a hazardous waste under Chapter 41, it shall be managed as a hazardous waste in accordance with all applicable requirements of Chapters 42 through 46. If the collected material is discharged through a point source to waters of the United States, it is subject to the requirements of §402 of the Clean Water Act, as amended.

4408.10 Except as provided by §4408.11, the storage areas that store containers holding only wastes that do not contain free liquids shall not be required to have a containment system as defined by §4408.9, if:

(a) The storage area is sloped or is otherwise designed and operated to drain and remove liquid resulting from precipitation; or

(b) The containers are elevated or are otherwise protected from contact with accumulated liquid.

4408.11 Storage areas that store containers holding the wastes listed in this subsection that do not contain free liquids shall have a containment system defined by §4408.9:

(a) F020, F021, F022, F023, F026, and F027.

(b) [Reserved].

4408.12 Containers holding ignitable or reactive waste shall be located at least fifteen (15) meters (50 ft.) from the facility's property line.

4408.13 Incompatible wastes, or incompatible wastes and materials (see Appendix V of 40 CFR Part 264 for examples), shall not be placed in the same container, unless §4401.31 is complied with.

4408.14 Hazardous waste shall not be placed in an unwashed container that previously held an incompatible waste or material.

4408.15 As required by §§4401.8 through 4401.13, the waste analysis plan shall include analyses needed to comply with §4408.13 through 4408.16. Also, §4401.13 requires wastes analyses, trial tests or other documentation to assure compliance with §4401.31. As required by §§4404.9 through 4404.10, the owner or operator shall place the results of each waste analysis and trial test, and any documented information, in the operating record of the facility.

4408.16 A storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby in other containers, piles, open tanks, or surface impoundments shall be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.

4408.17 At closure, all hazardous waste and hazardous waste residues shall be removed from the containment system. Remaining containers, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues shall be decontaminated or removed.

4408.18 At closure, as throughout the operating period, unless the owner or operator can demonstrate in accordance with §4100.14 that the solid waste removed from the containment system is not a hazardous waste, the owner or operator becomes a

generator of hazardous waste and shall manage it in accordance with all applicable requirements of §§42 through 46.

SOURCE: Final Rulemaking published at 43 DCR 1077 (March 1, 1996), incorporating by reference the text of Chapters 40 through 54.

4409 TANK SYSTEMS

4409.1 The requirements of §4409 shall apply to owners and operators of facilities that use tank systems for storage or treating hazardous waste except as otherwise provided in §§4409.2 and 4409.3 or §§4400.1 through 4400.7.

4409.2 Tanks that are used to store or treat hazardous waste which contains no free liquids and are situated inside a building with an impermeable floor shall be exempted from the requirements in §§4409.15 through 4409.23. To demonstrate the absence or presence of free liquids in the stored/treated waste, EPA Method 9095 (Paint Filter Liquids Test) as described in "*Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods*" (EPA Publication No. SW-846) shall be used.

4409.3 Tanks, including sumps, as defined in Chapter 54, that serve as part of a secondary containment system to collect or contain releases of hazardous wastes shall be exempted from the requirements in §§4409.15 through 4409.23.

4409.4 For each existing tank system that does not have secondary containment meeting the requirements of §§4409.15 through 4409.23, the owner or operator shall determine that the tank system is not leaking or is unfit for use. Except as provided in §4409.6, the owner or operator shall obtain and keep on file at the facility a written assessment reviewed and certified by an independent, qualified registered professional engineer, in accordance with §4601.20, that attests to the tank system's integrity by January 12, 1988.

4409.5 The assessment of an existing tank system's integrity shall determine that the tank system is adequately designed and has sufficient structural strength and compatibility with the waste(s) to be stored or treated, to ensure that it will not collapse, rupture, or fail. At a minimum, this assessment shall consider the following:

(a) Design standard(s), if available, according to which the tank and ancillary equipment were constructed;

(b) Hazardous characteristics of the waste(s) that have been and will be handled;

(c) Existing corrosion protection measures;

(d) Documented age of the tank system, if available (otherwise, an estimate of the age); and

(e) Results of a leak test, internal inspection, or other tank integrity examination such that:

(1) For non-enterable underground tanks, the assessment shall include a leak test that is capable of taking into account the effects of temperature variations, tank end deflection, vapor pockets, and high water table effects; and

(2) For other than non-enterable underground tanks and for ancillary equipment, this assessment shall include either a leak test, as described in §4409.5(e)(1), or other integrity examination, that is certified by an independent, qualified, registered professional engineer in accordance with §4601.20, that addresses cracks, leaks, corrosion, and erosion.

4409.6 Tank systems that store or treat materials that become hazardous wastes subsequent to July 14, 1986, shall conduct this assessment within twelve (12) months after the date that the waste becomes a hazardous waste.

4409.7 If, as a result of the assessment conducted in accordance with §4409.4, a tank system is found to be leaking or unfit for use, the owner or operator shall comply with the requirements of §§4409.31 and 4409.32.

4409.8 Owners or operators of new tank systems or components shall obtain and submit to the Director, at time of submittal of Part B information, a written assessment, reviewed and certified by an independent, qualified registered professional engineer, in accordance with §4601.20, attesting that the tank system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. The assessment shall show that the foundation, structural support, seams connections, and pressure controls (if applicable) are adequately designed and that the tank system has sufficient structural strength, compatibility with the waste(s) to be stored or treated, and corrosion protection to ensure that it will not collapse, rupture, or fail. This assessment, which will be used by the Director to review and approve or disapprove the acceptability of the tank system design, shall include, at a minimum, the following information:

(a) Design standard(s) according to which tank(s) and ancillary equipment are constructed;

(b) Hazardous characteristics of the waste(s) to be handled;

(c) For new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system will be in contact with the soil or with water, a determination by a corrosion expert of the following:

(1) Factors affecting the potential for corrosion, including but not limited to, the following:

(A) Soil moisture content;

(B) Soil pH;

(C) Soil sulfides level;

(D) Soil resistivity;

(E) Structure to soil potential;

(F) Influence of nearby underground metal structures (e.g., piping);

(G) Existence of stray electric current; and

(H) Existing corrosion-protection measures (e.g., coating, cathodic protection); and

(2) The type and degree of external corrosion protection that are needed to ensure the integrity of the tank system during the use of the tank system or component, consisting of one or more of the following:

(A) Corrosion-resistant materials of construction such as special alloys, fiberglass reinforced plastic, etc.;

(B) Corrosion-resistant coating (such as epoxy, fiberglass, etc.) with cathodic protection (e.g., impressed current or sacrificial anodes); and

(C) Electrical isolation devices such as insulating joints, flanges, etc.

(d) For underground tank system components that are likely to be adversely affected by vehicular traffic, a determination of design or operational measures that will protect the tank system against potential damage; and

(e) Design considerations to ensure that:

(1) Tank foundations will maintain the load of a full tank;

(2) Tank systems will be anchored to prevent flotation or dislodgement where the tank system is placed in a saturated zone, or is located within a seismic fault zone subject to the standards of §4401.33; and

(3) Tank systems will withstand the effects of frost heave.

4409.9 The owner or operator of a new tank system shall ensure that proper handling procedures are adhered to in order to prevent damage to the system during installation. Prior to covering, enclosing, or placing a new tank system or component in use, an independent, qualified installation inspector or an independent, qualified registered professional engineer, either of whom is trained and experienced in the proper installation of tank systems or components, shall inspect the system for the presence of any of the following items:

(a) Weld breaks;

(b) Punctures;

(c) Scrapes of protective coatings;

(d) Cracks;

(e) Corrosion; and

(f) Other structural damage or inadequate construction/installation. All discrepancies shall be remedied before the tank system is covered, enclosed, or placed in use.

4409.10 New tank systems or components that are placed underground and that are backfilled shall be provided with a backfill material that is a noncorrosive, porous, homogeneous substance and that is installed so that the backfill is placed completely around the tank and compacted to ensure that the tank and piping are fully and uniformly supported.

4409.11 All new tanks and ancillary equipment shall be tested for tightness prior to being covered, enclosed, or placed in use. If a tank system is found not to be tight, all

repairs necessary to remedy the leak(s) in the system shall be performed prior to the tank system being covered, enclosed, or placed into use.

4409.12 Ancillary equipment shall be supported and protected against physical damage and excessive stress due to settlement, vibration, expansion, or contraction.

4409.13 The owner or operator shall provide the type and degree of corrosion protection recommended by an independent corrosion expert, based on the information provided under §4409.8(c), or other corrosion protection if the Director believes other corrosion protection is necessary to ensure the integrity of the tank system during use of the tank system. The installation of a corrosion protection system that is field fabricated shall be supervised by an independent corrosion expert to ensure proper installation.

4409.14 The owner or operator shall obtain and keep on file at the facility written statements by those persons required to certify the design of the tank system and supervise the installation of the tank system in accordance with the requirements of §§4409.9 through 4409.13, that attest that the tank system was properly designed and installed and that repairs, pursuant to §§4409.9 through 4409.11, were performed. These written statements shall also include the certification statement as required in §4601.20.

4409.15 In order to prevent the release of hazardous waste or hazardous constituents to the environment, secondary containment that meets the requirements of this section shall be provided (except as provided in §§4409.20 and 4409.21):

(a) For all new tank systems or components, prior to their being put into service;

(b) For all existing tank systems used to store or treat EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027, within two (2) years after January 12, 1987;

(c) For those existing tank systems of known and documented age, within two (2) years after January 12, 1987, or when the tank system has reached fifteen (15) years of age, whichever comes later;

(d) For those existing tank systems for which the age cannot be documented, within eight (8) years of January 12, 1987, but if the age of the facility is greater than seven (7) years, secondary containment shall be provided by the time the facility reaches fifteen (15) years of age, or within two (2) years of January 12, 1987, whichever comes later; and

(e) For tank systems that store or treat materials that become hazardous wastes subsequent to January 12, 1987, within the time intervals required in paragraphs (a) through (d) of this section, except that the date that a material becomes a hazardous waste must be used in place of January 12, 1987.

4409.16 Secondary containment systems shall be:

(a) Designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground-water, or surface water at any time during the use of the tank system; and

(b) Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

4409.17 To meet the requirements of §4409.16, secondary containment systems shall be at a minimum:

(a) Constructed of or lined with materials that are compatible with the wastes to be placed in the tank system and must have sufficient strength and thickness to prevent failure owing to pressure gradients (including static head and external hydrological forces), physical contact with the waste to which it is exposed, climatic conditions, and the stress of daily operation (including stresses from nearby vehicular traffic);

(b) Placed on a foundation or base capable of providing support to the secondary containment system, resistance to pressure gradients above and below the system, and capable of preventing failure due to settlement, compression, or uplift;

(c) Provided with a leak-detection system that is designed and operated so that it will detect the failure of either the primary or secondary containment structure or the presence of any release of hazardous waste or accumulated liquid in the secondary containment system within twenty-four hours (24 hrs.), or at the earliest practicable time if the owner or operator can demonstrate to the Director that existing detection technologies or site conditions will not allow detection of a release within twenty-four hours (24 hrs.); and

(d) Sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation. Spilled or leaked waste and accumulated precipitation shall be removed from the secondary containment system within twenty-four hours (24 hrs.), or in as timely a manner as is possible to prevent harm to human health and the environment, if the owner or operator can demonstrate to the Director that removal of the released waste or accumulated precipitation cannot be accomplished within twenty-four hours (24 hrs.).

4409.18 Secondary containment for tanks shall include one or more of the following devices:

(a) A liner (external to the tank);

(b) A vault;

(c) A double-walled tank; or

(d) An equivalent device as approved by the Director.

4409.19 In addition to the requirements of §§4409.16 through 4409.18, secondary containment systems shall satisfy the following requirements:

(a) External liner systems shall be:

(1) Designed or operated to contain one hundred percent (100%) of the capacity of the largest tank within its boundary;

(2) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. The additional capacity shall be sufficient to contain precipitation from a twenty-five year (25 yr.), twenty-four hour (24 hr.) rainfall event;

(3) Free of cracks or gaps; and

(4) Designed and installed to surround the tank completely and to cover all surrounding earth likely to come into contact with the waste if the waste is released from the tank(s) (i.e., capable of preventing lateral as well as vertical migration of the waste).

(b) Vault systems shall be:

(1) Designed or operated to contain one hundred percent (100%) of the capacity of the largest tank within its boundary;

(2) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. The additional capacity shall be sufficient to contain precipitation from a twenty-five year (25 yr.), twenty-four hour (24 hr.) rainfall event;

(3) Constructed with chemical resistant water stops in place at all joints, if any;

(4) Provided with an impermeable interior coating or lining that is compatible with the stored waste and that will prevent migration of waste into the concrete;

(5) Provided with a means to protect against the formation of and ignition of vapors within the vault, if the waste being stored or treated:

(A) Meets the definition of ignitable waste under §4102.4 of this chapter; or

(B) Meets the definition of reactive waste under §4102.8 of this chapter and may form an ignitable or explosive vapor.

(6) Provided with an exterior moisture barrier or be otherwise designed or operated to prevent migration of moisture into the vault if the vault is subject to hydraulic pressure;

(c) Double-walled tanks shall be:

(1) Designed as an integral structure (i.e., an inner tank completely enveloped within an outer shell) so that any release from the inner tank is contained by the outer shell;

(2) Protected, if constructed of metal, from both corrosion of the primary tank interior and of the external surface of the outer shell; and

(3) Provided with a built-in continuous leak detection system capable of detecting a release within twenty-four hours (24 hrs.), or at the earliest practical time, if the owner or operator can demonstrate to the Director, and the Director concludes, that the existing detection technology or site conditions would not allow detection of a release within twenty-four hours (24 hrs.).

4409.20 Ancillary equipment shall be provided with secondary containment (e.g., trench, jacketing, double-walled piping) that meets the requirements of §§4409.16 and 4409.17, except for:

(a) Aboveground piping (exclusive of flanges, joints, valves, and other connections) that are visually inspected for leaks on a daily basis;

(b) Welded flanges, welded joints, and welded connections, that are visually inspected for leaks on a daily basis;

(c) Sealless or magnetic coupling pumps, that are visually inspected for leaks on a daily basis; and

(d) Pressurized above ground piping systems with automatic shut-off devices (e.g., excess flow check valves, flow metering shutdown devices, loss of pressure actuated shut-off devices) that are visually inspected for leaks on a daily basis.

4409.21 The owner or operator may obtain a variance from the requirements of §§4409.15 through 4409.20 if the Director finds, as a result of a demonstration by the owner or operator that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous waste or hazardous waste constituents into the ground-water or surface water at least as effectively as secondary containment during the active life of the tank system or that in the event of a release that does migrate to ground-water or surface water, no substantial present or potential hazard will be posed to human health or the environment. New underground tank systems may not, per a demonstration in accordance with paragraph (b) of this section, be exempted from the secondary containment requirements of this section:

(a) In deciding whether to grant a variance based on a demonstration of equivalent protection of ground-water and surface water, the Director shall consider the following:

(1) The nature and quantity of the wastes;

(2) The proposed alternate design and operation;

(3) The hydrogeologic setting of the facility, including the thickness of soils present between the tank system and ground-water, and

(4) All other factors that would influence the quality and mobility of the hazardous constituents and the potential for them to migrate to ground-water or surface water;

(b) In deciding whether to grant a variance based on a demonstration of no substantial present or potential hazard, the Director shall consider the following:

(1) The potential adverse effects on ground-water, surface water, and land quality taking into account:

(A) The physical and chemical characteristics of the waste in the tank system, including its potential for migration;

(B) The hydrogeological characteristics of the facility and surrounding land;

(C) The potential for health risks caused by human exposure to waste constituents;

(D) The potential for damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents, and

(E) The persistence and permanence of the potential adverse effects;

(2) The potential adverse effects of a release on ground-water quality, taking into account:

(A) The quantity and quality of ground-water and the direction of ground-water flow;

(B) The proximity and withdrawal rates of ground-water users;

(C) The current and future uses of ground-water in the area; and

(D) The existing quality of ground-water, including other sources of contamination and their cumulative impact on the ground-water quality;

(3) The potential adverse effects of a release on surface water quality, taking into account:

(A) The quantity and quality of ground-water and the direction of ground-water flow;

(B) The patterns of rainfall in the region;

(C) The proximity of the tank system to surface waters;

(D) The current and future uses of surface waters in the area and any water quality standards established for those surface waters; and

(E) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface-water quality; and

(4) The potential adverse effects of a release on the land surrounding the tank system, taking into account:

(A) The patterns of rainfall in the region; and

(B) The current and future uses of the surrounding land;

(c) The owner or operator of the tank system, for which a variance from secondary containment had been granted in accordance with the requirements of paragraph (a) of this section, at which a release of hazardous waste has occurred from the primary tank system, but has not migrated beyond the zone of engineering control (as established in the variance), shall do the following:

(1) Comply with the requirements of §4409.31, except paragraph (e); and

(2) Decontaminate or remove contaminated soil to the extent necessary to do the following:

(A) Enable the tank system for which the variance was granted to resume operation with the capability for the detection of releases

at least equivalent to the capability it had prior to the release; and

(B) Prevent the migration of hazardous waste or hazardous constituents to ground-water or surface water; and

(3) If contaminated soil cannot be removed or decontaminated in accordance with paragraph (c)(2) of this section, comply with the requirement of §4409.33; and

(d) The owner or operator of a tank system, for which a variance from secondary containment had been granted in accordance with the requirements of paragraph (a) of this section, at which a release of hazardous has occurred from the primary tank system and has migrated beyond the zone of engineering control (as established in the variance), shall do the following:

(1) Comply with the requirements of §§4409.31(a) through (e); and

(2) Prevent the migration of hazardous waste or hazardous constituents to ground-water or surface water, if possible, and decontaminate or remove contaminated soil. If contaminated soil cannot be decontaminated or removed or if ground-water has been contaminated, the owner or operator shall comply with the requirements of §4409.33; and

(3) If repairing, replacing, or reinstalling the tank system, provide secondary containment in accordance with the requirements of §§4409.15 through 4409.20 or reapply for a variance from secondary containment and meet the requirements for new tank systems in §§4409.8 through 4409.14 if the tank system is replaced. The owner or operator shall comply with these requirements even if contaminated soil can be decontaminated or removed and ground-water or surface water has not been contaminated.

4409.22 The following procedures shall be followed in order to request a variance from secondary containment:

(a) The Director shall be notified in writing by the owner or operator that he or she intends to conduct and submit a demonstration for a variance from secondary containment as allowed in §4409.21 according to the following schedule:

(1) For existing tank systems, at least twenty-four months (24 mos.) prior to the date that secondary containment shall be provided in accordance with §4409.15; and

(2) For new tank systems, at least thirty (30) days prior to entering into a contract for installation;

(b) As part of the notification, the owner or operator shall also submit to the Director a description of the steps necessary to conduct the demonstration and a timetable for completing each of the steps. The demonstration shall address each of the factors listed in §4409.21(a) or 4409.21(b) of this section;

(c) The demonstration for a variance must be completed within one hundred eighty (180) days after notifying the Director of an intent to conduct the demonstration; and

(d) If a variance is granted under this paragraph, the Director will require the permittee to construct and operate the tank system in the manner that was demonstrated to meet the requirements for the variance.

4409.23 All tank systems, until such time as secondary containment that meets the requirements of this section is provided, shall comply with the following:

(a) For non-enterable underground tanks, a leak test that meets the requirements of §4409.5(e) or other tank integrity method, as approved or required by the Director shall be conducted at least annually;

(b) For other than non-enterable underground tanks, the owner or operator shall either conduct a leak test as in paragraph (a) of this section or develop a schedule and procedure for an assessment of the overall condition of the tank system by an independent, qualified registered professional engineer. The schedule and procedure shall be adequate to detect obvious cracks, leaks, and corrosion or erosion that may lead to cracks and leaks. The owner or operator shall remove the stored waste from the tank, if necessary, to allow the condition of all internal tank surfaces to be assessed. The frequency of these assessments shall be based on the material of construction of the tank and its ancillary equipment, the age of the system, the type of corrosion or erosion protection used, the rate of corrosion or erosion observed during the previous inspection, and the characteristics of the waste being stored or treated;

(c) For ancillary equipment, a leak test or other integrity assessment as approved by the Director shall be conducted at least annually;

(d) The owner or operator shall maintain on file at the facility a record of the results of the assessments conducted in accordance with paragraphs (a) through (c) of this section; and

(e) If a tank system or component is found to be leaking or unfit for use as a result of the leak test or assessment in paragraphs (a) through (c) of this section, the owner or operator shall comply with requirements of §§4409.31 and 4409.32.

4409.24 Hazardous wastes or treatment reagents shall not be placed in a tank system if they could cause the tank, its ancillary equipment, or the containment system to rupture, leak, corrode, or otherwise fail.

4409.25 The owner or operator shall use appropriate controls and practices to prevent spills and overflows from tank or containment systems. These include, at a minimum, the following:

(a) Spill prevention controls (e.g., check valves, dry disconnect couplings);

(b) Overfill prevention controls (e.g., level sensing devices, high level alarms, automatic feed cutoff, or by pass to a standby tank); and

(c) Maintenance or sufficient freeboard in uncovered tanks to prevent overtopping by wave or wind action or by precipitation.

4409.26 The owner or operator shall comply with the requirements of §§4409.31 and 4409.32 if a leak or spill occurs in the tank system.

4409.27 The owner or operator shall develop and follow a schedule and procedure for inspecting overfill controls each operating day.

4409.28 The owner or operator shall inspect at least once, each operating day the following:

(a) Aboveground portions of the tank system, if any, to detect corrosion or release of waste;

(b) Data gathered from monitoring and leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design; and

(c) The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system (e.g., dikes) to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).

4409.29 The owner or operator shall inspect cathodic protection systems, if present, according to, at a minimum, the following schedule to ensure that they are functioning properly:

(a) The proper operation of the cathodic protection system shall be confirmed within six (6) months after initial installation and annually thereafter; and

(b) All sources of impressed current shall be inspected or tested, as appropriate, at least bimonthly (i.e., every other month).

4409.30 The owner or operator shall document in the operating record of the facility an inspection of those items in §§4409.27 through 4409.29.

4409.31 A tank system or secondary containment system from which there has been a leak or spill, or which is unfit for use, shall be removed from service immediately, and the owner or operator shall satisfy the following requirements:

(a) The owner or operator shall immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release;

(b) If the release was from the tank system, the owner/operator shall, within twenty-four hours (24 hrs.) after detection of the leak or, if the owner/operator demonstrates that it is not possible, at the earliest practicable time, remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed;

(c) If the material released was to a secondary containment system, all released materials shall be removed within twenty-four hours (24 hrs.) or in as timely a manner as is possible to prevent harm to human health and the environment;

(d) The owner/operator shall immediately conduct a visual inspection of the release and, based upon that inspection:

(1) Prevent further migration of the leak or spill to soils or surface water; and

(2) Remove, and properly dispose of, any visible contamination of the soil or surface water;

(e) Any release to the environment, except as provided in paragraph (e)(1) of this section, shall be reported to the Director within twenty-four hours (24 hrs.) of its detection:

(1) A leak or spill of hazardous waste shall be exempted from the requirements of this paragraph if it:

(A) Less than or equal to a quantity of one pound (1 lb.); and

(B) Immediately contained and cleaned up;

(2) Within thirty (30) days of detection of a release to the environment, a report containing the following information shall be submitted to the Director:

(A) Likely route of migration of the release;

(B) Characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate);

(C) Results of any monitoring or sampling conducted in connection with the release (if available). If sampling or monitoring data relating to the release are not available within thirty (30) days, these data shall be submitted to the Director as soon as they become available;

(D) Proximity to downgradient drinking water, surface water, and populated areas; and

(E) Description of response actions taken or planned;

(f) The owner or operator shall make provisions for secondary containment, repair, or closure of the tank system:

(1) Unless the owner/operator satisfies the requirements of paragraphs (f)(2) through (4) of this section, the tank system shall be closed in accordance with §§4409.32 through 4409.34;

(2) If the cause of the release was a spill that has not damaged the integrity of the system, the owner/operator may return the system to service as soon as the released waste is removed and repairs, if necessary, are made;

(3) If the cause of the release was a leak from the primary tank system into the secondary containment system, the system shall be repaired prior to returning the tank system to service; and

(4) If the source of the release was a leak to the environment from a component of a tank system without secondary containment, the owner/operator shall provide the component of the system from which the leak occurred with secondary containment that satisfies the requirements of §§4409.15 through 4409.24 before it can be returned to service, unless the source of the leak is an aboveground portion of a tank system that can be inspected visually. If the source is an above ground component that can be inspected visually, the component shall be repaired and may be returned to service without secondary containment as long as the requirements of paragraph (g) of this section are satisfied. If a component is replaced to comply with the

requirements of this subparagraph, that component shall satisfy the requirements for new tank systems or components in §§4409.8 through 4409.24. Additionally, if a leak has occurred in any portion of a tank system component that is not readily accessible for visual inspection (e.g., the bottom of an inground or onground tank), the entire component shall be provided with secondary containment in accordance with §§4409.15 through 4409.24 prior to being returned to use; and

(g) If the owner/operator has repaired a tank system in accordance with paragraph (f) of this section, and the repair has been extensive (e.g., installation of an internal liner; repair of a ruptured primary containment or secondary containment vessel), the tank system shall not be returned to service unless the owner/operator has obtained a certification by an independent, qualified, registered, professional engineer in accordance with §4601.20 that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. This certification shall be submitted to the Director within seven (7) days after returning the tank system to use.

4409.32 At closure of a tank system, the owner or operator shall remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated soils, and structures and equipment contaminated with waste, and manage them as hazardous waste, unless §4100.14 applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for tank systems shall meet all of the requirements specified in §§4406 and 4407.

4409.33 If the owner or operator demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in §4409.32, then the owner or operator shall close the tank system and perform post-closure care in accordance with the closure and post-closure care requirements of §§4406.30 and 4406.31. In addition, for the purposes of closure, post-closure, and financial responsibility, such a tank system is then to be considered a landfill and the owner or operator shall meet all of the requirements specified in §§4406 and 4407.

4409.34 If an owner or operator has a tank system that does not have secondary containment that meets the requirements of §§4409.16 through 4409.20, and has not been granted a variance from the secondary containment requirements in accordance with §4409.21, then:

(a) The closure plan for the tank system shall include both a plan for complying with §4409.32 and a contingent plan for complying with §4409.33;

(b) A contingent post-closure plan for complying with §4409.33 shall be prepared and submitted as part of the permit application;

(c) The cost estimates calculated for closure and post-closure care shall reflect the costs of complying with the contingent closure plan and the contingent post-closure plan, if those costs are greater than the costs of complying with the closure plan prepared for the expected closure under §4409.32;

(d) Financial assurance shall be based on the cost estimates in paragraph (c) of this section; and

(e) For the purposes of the contingent closure and post-closure plans, such a tank is considered to be a landfill and the contingent plans shall meet all of the closure, post-closure, and financial responsibility requirements for landfills under §§4406 and 4407.

4409.35 Ignitable or reactive waste shall not be placed in tank systems, unless:

(a) The waste is treated, rendered, or mixed before or immediately after placement in the tank system so that:

(1) The resulting waste, mixture, or dissolved material no longer meets the definition of ignitable or reactive waste under §4102.4 or 4102.8 of this chapter; and

(2) Sections 4401.30 through 4401.32 are complied with;

(b) The waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to ignite or react; or

(c) The tank system is used solely for emergencies.

4409.36 The owner or operator of a facility where ignitable or reactive waste is stored or treated in a tank shall comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjoining property line that can be built upon as required in Tables 2-1 through 2-6 of the National Fire Protection Association's "*Flammable and Combustible Liquids Code*," (1977 or 1981), (incorporated by reference, see Chapter 53).

4409.37 Incompatible wastes, or incompatible wastes and materials, shall not be placed in the same tank system, unless §§4401.30 through 4401.32 is complied with.

4409.38 Hazardous waste shall not be placed in a tank system that has not been decontaminated and that previously held an incompatible waste or material, unless §§4401.30 through 4401.32 is complied with.

SOURCE: Final Rulemaking published at 43 DCR 1077 (March 1, 1996), incorporating by reference the text of Chapters 40 through 54.

4410 WASTE PILES

4410.1 The regulations of this section shall apply to owners and operators of facilities that store or treat hazardous waste in piles, except as §§4400.1 through 4400.8 provide otherwise. Hazardous waste shall not be disposed of in waste piles in the District of Columbia.

4410.2 Owners and operators of waste piles shall treat or store hazardous wastes as follows:

(a) Liquids or materials containing free liquids shall not be placed in the pile;

(b) The pile is inside or under a structure that provides protection from precipitation so that neither run-off nor leachate is generated;

(c) The pile shall be protected from surface water run-off by the structure or in some other manner;

(d) The pile shall be designed and operated to control dispersal of the waste by wind, where necessary, by means other than wetting; and

(e) The pile shall not generate leachate through decomposition or other reactions.

4410.3 A waste pile (except for an existing portion of a waste pile) shall have the following:

(a) A liner that is designed, constructed, and installed to prevent any migration of wastes out of the pile into the adjacent subsurface soil or ground-water or surface water at any time during the active life (including the closure period) of the waste pile. The liner may be constructed of materials that may allow waste to migrate into the liner itself (but not into the adjacent subsurface soil or ground-water or surface water) during the active life of the facility. The liner shall be:

(1) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress daily operation;

(2) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift; and

(3) Installed to cover all surrounding earth likely to be in contact with the waste or leachate; and

(b) A leachate collection and removal system immediately above the liner that is designed, constructed, maintained, and operated to collect and remove leachate from the pile. The Director shall specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed thirty (30) cm (one foot). The leachate collection and removal system shall be:

(1) Constructed of materials that are:

(A) Chemically resistant to the waste managed in the pile and the leachate expected to be generated; and

(B) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlaying wastes, waste cover materials, and by any equipment used at the pile; and

(2) Designed and operated to function without clogging through the scheduled closure of the waste pile.

4410.4 The owner or operator shall be exempted from the requirements of §4410.3, if the Director finds, based on a demonstration by the owner or operator, that alternate design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents (see §§4405.9 through 4405.11) into the ground-water or surface water at any future time. In deciding whether to grant an exemption, the Director shall consider the following:

(a) The nature and quantity of the wastes;

(b) The proposed alternate design and operation;

(c) The hydrogeologic setting of the facility, including attenuative capacity and thickness of the liners and soils present between the pile and ground-water or surface water; and

(d) All other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to ground-water or surface water.

4410.5 The owner or operator shall design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the pile during peak discharge from at least a twenty-five year (25 yr.) storm.

4410.6 The owner or operator shall design, construct, operate, and maintain a run-off management system to collect and control at least the water volume resulting from a twenty-four hour (24 hr.) twenty-five year (25 yr.) storm.

4410.7 Collection and holding facilities (e.g., tanks or basins) associated with run-on or run-off control systems shall be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.

4410.8 If the pile contains any particulate matter which may be subject to wind dispersal, the owner or operator shall cover or otherwise manage the pile to control wind dispersal.

4410.9 The Director shall specify in the permit all design and operating practices that are necessary to ensure that the requirements of this section are satisfied.

4410.10 During construction or installation, liners and cover systems (e.g., membranes, sheets, or coatings) shall be inspected for uniformity, damage, and imperfections (e.g., holes, cracks, thin spots, or foreign materials).

4410.11 Immediately after construction or installation:

(a) Synthetic liners and covers shall be inspected to ensure tight seams and joints and the absence or tears, punctures, or blisters; and

(b) Soil-based and admixed liners and covers shall be inspected for imperfections including lenses, cracks, channels, root holes, or other structural non-uniformities that may cause an increase in the permeability of the liner or cover.

4410.12 While a waste pile is in operation, it shall be inspected weekly and after storms to detect evidence of any of the following:

(a) Deterioration, malfunctions, or improper operation of run-on and run-off control systems;

(b) The presence of leachate in and proper functioning of leachate collection and removal systems, where installed; and

(c) Proper functioning of wind dispersal control systems, where present.

4410.13 Ignitable or reactive waste shall not be placed in a waste pile, unless:

(a) The waste is treated, rendered, or mixed before or immediately after placement in the pile so that:

(1) The resulting waste, mixture or dissolution of material no longer meets the definition of ignitable or reactive waste under §§4102.4 and 4102.5 or 4102.8 and 4102.9; and

(2) Section 4401.31 is complied with.

(b) The waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react.

4410.14 Incompatible wastes, or incompatible wastes and materials (see Appendix V of 40 CFR Part 264 for examples), shall not be placed in the same pile, unless §4401.31 is complied with.

4410.15 A pile of hazardous waste that is incompatible with any waste or other material stored nearby in other containers, piles, or open tanks shall be separated from the other materials, or protected from them by means of a dike, berm, wall, or other device.

4410.16 Hazardous waste shall not be piled on the same base where incompatible wastes or materials were previously piled, unless the base has been decontaminated sufficiently to ensure compliance with §4401.31.

4410.17 At closure, the owner or operator shall remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless §§4100.11 through 4100.14 applies.

4410.18 If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in §4410.17, the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, he or she shall close the facility and perform post-closure care in accordance with the closure and post-closure care requirements of this chapter.

4410.19 The owner or operator of a waste pile that does not comply with the liner requirements of §4410.3(a) and is not exempt from them in accordance with §4410.2(b) or 4410.4 shall do the following:

(a) Include in the closure plan for the pile under §§4406.2 through 4406.9 both a plan for complying with §§4410.17 and a contingent plan for complying with §§4410.18 in case not all contaminated subsoils can be practicably removed at closure; and

(b) Prepare a contingent post-closure plan under §§4406.20 through 4406.24 for complying with §4410.18 of this section in case not all contaminated subsoils can be practicably removed at closure.

4410.20 The cost estimates calculated under §§4407.5 through 4407.13 for closure and post-closure care of a pile subject to §4410.19 shall include the cost of complying with the contingent closure plan and the contingent post-closure plan, but are not required to include the cost of expected closure under §4410.17 of this section.

4410.21 Hazardous Wastes F020, F021, F022, F023, F026, and F027 shall not be placed in waste piles that are not enclosed (as defined in §4410.2(b)) unless the owner or operator operates the waste pile in accordance with a management plan for these wastes that is approved by the Director pursuant to the standards set out

in this paragraph, and in accordance with all other applicable requirements of this part. The factors to be considered are as follows:

(a) The volume, physical, and chemical characteristics of the waste, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

(b) The attenuative properties of underlying and surrounding soils or other materials;

(c) The mobilizing properties of other materials co-disposed with these wastes; and

(d) The effectiveness of additional treatment, design, or monitoring techniques.

4410.22 The Director shall determine that additional design, operating, and monitoring requirements are necessary for piles managing hazardous waste F020, F021, F022, F023, F026, and F027 in order to reduce the possibility of migration of these wastes to ground-water, surface water, or air so as to protect human health and the environment.

SOURCE: Final Rulemaking published at 43 DCR 1077 (March 1, 1996), incorporating by reference the text of Chapters 40 through 54.

4411 - 4419 **[RESERVED]**

4420 MISCELLANEOUS UNITS

4420.1 The requirements of §4420 shall apply to owners and operators of facilities that treat, store, or dispose of hazardous waste in miscellaneous units except as §§4400.1 through 4400.7 provide otherwise.

4420.2 A miscellaneous unit shall be located, designed, constructed, operated, maintained, and closed in a manner that will ensure protection of human health and the environment. Permits for miscellaneous units shall contain such terms and provisions as necessary to protect human health and the environment, including, but not limited to, as appropriate, design and operating requirements, detection and monitoring requirements, and requirements for responses to releases of hazardous waste or hazardous constituents from the unit. Permit terms and provisions shall include those requirements of §§4408 through 4411 and Chapter 46 that are appropriate for the miscellaneous unit being permitted. Protection of human health and the environment includes, but is not limited to, the following:

(a) Prevention of any releases that may have adverse effects on human health or the environment due to migration of waste constituents in the ground-water or subsurface environment, considering the following:

(1) The volume and physical and chemical characteristics of the waste in the unit, including its potential for migration through soil, liners, or other containing structures;

(2) The hydrologic and geologic characteristics of the unit and the surrounding area;

(3) The existing quality of ground-water, including other sources of contamination and their cumulative impact on the ground-water.

(4) The quantity and direction of ground-water flow;

(5) The proximity to and withdrawal rates of current and potential ground-water users.

(6) The patterns of land use in the region;

(7) The potential for deposition or migration of waste constituents into subsurface physical structures, and into the root zone of food-chain crops and other vegetation;

(8) The potential for health risks caused by human exposure to waste constituents; and

(9) The potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;

(b) Prevention of any releases that may have adverse effects on human health or the environment due to migration of waste constituents in surface water, or wetlands or on the soil surface considering the following:

(1) The volume and physical and chemical characteristics of the waste in the unit;

(2) The effectiveness and reliability of containing, confining, and collecting systems and structures in preventing migration;

(3) The hydrologic characteristics of the unit and the surrounding area, including the topography of the land around the unit;

(4) The patterns of precipitation in the region;

(5) The quantity, quality, and direction of ground-water flow;

(6) The proximity of the unit to surface waters;

(7) The current and potential uses of nearby surface waters and any water quality standards established for those surface waters;

(8) The existing quality of surface waters and surface soils, including other sources of contamination and their cumulative impact on surface waters and surface soils;

(9) The patterns of land use in the region;

(10) The potential for health risks caused by human exposure to waste constituents, and

(11) The potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.

(c) Prevention of any release that may have adverse effects on human health or the environment due to migration of waste constituents in the air, considering the following:

(1) The volume and physical and chemical characteristics of the waste in the unit, including its potential for the emission and dispersal of gases, aerosols and particulates;

(2) The effectiveness and reliability of systems and structures to reduce or prevent emissions of hazardous constituents to the air;

(3) The operating characteristics of the unit;

(4) The atmospheric, meteorologic, and topographic characteristics of the unit and the surrounding area;

(5) The existing quality of the air, including other sources of contamination and their cumulative impact on the air;

(6) The potential for health risks caused by human exposure to waste constituents; and

(7) The potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.

4420.3 Monitoring, testing, analytical data, inspections, responses, and reporting procedures and frequencies shall ensure compliance with §§4420.2, 4401.17 through 4401.22, 4402.4, 4404.14 through 4404.16, and 4405.55 through 4405.57, as well as meet any additional requirements needed to protect human health and the environment as specified in the permit.

4420.4 A miscellaneous unit that is a disposal unit shall be maintained in a manner that complies with §4420.2 during the post-closure care period. In addition, if a treatment or storage unit has contaminated soils or ground-water that cannot be completely removed or decontaminated during closure, then that unit shall also meet the requirements of §4420.2 during post-closure care. The post-closure plan under §§4406.22 through 4406.25 shall specify the procedures that will be used to satisfy this requirement.

SOURCE: Final Rulemaking published at 43 DCR 1077 (March 1, 1996), incorporating by reference the text of Chapters 40 through 54.